

HENRY FROWDE, M.A.  
PUBLISHER TO THE UNIVERSITY OF OXFORD  
LONDON, EDINBURGH  
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*Burmese Words*

Burmese and some of the languages on the frontier of China have the following special sounds :—

aw has the vowel-sound in 'law.'

ö and ü are pronounced as in German.

gy is pronounced almost like *j* in 'jewel.'

ky is pronounced almost like *ch* in 'church.'

th is pronounced in some cases as in 'this,' in some cases as in 'thin.'

w after a consonant has the force of *uv*. Thus, *ywa* and *pwe* are disyllables, pronounced as if written *yuva* and *puve*.

It should also be noted that, whereas in Indian words the accent or stress is distributed almost equally on each syllable, in Burmese there is a tendency to throw special stress on the last syllable.

*General*

The names of some places—e.g. Calcutta, Bombay, Lucknow, Cawnpore—have obtained a popular fixity of spelling, while special forms have been officially prescribed for others. Names of persons are often spelt and pronounced differently in different parts of India ; but the variations have been made as few as possible by assimilating forms almost alike, especially where a particular spelling has been generally adopted in English books.

## NOTES ON MONEY, PRICES, WEIGHTS AND MEASURES

As the currency of India is based upon the rupee, all statements with regard to money throughout the *Gazetteer* have necessarily been expressed in rupees, nor has it been found possible to add generally a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2s., or one-tenth of a £ ; and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000 = £100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1s. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise

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same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops, where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted—based upon the assumptions that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1s. 4d. : 1 seer per rupee = (about) 3 lb. for 2s. ; 2 seers per rupee = (about) 6 lb. for 2s. ; and so on.

The name of the unit for square measurement in India generally is the *bigha*, which varies greatly in different parts of the country. But areas have always been expressed throughout the *Gazetteer* either in square miles or in acres.

## MAPS

BARODA . . . . .	to face p. 64
BENGAL . . . . .	„ 336
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generally is a fertile tract, especially noted for the production of sugar-cane. There are 65 towns and 11,403 villages. The largest towns are BAREILLY (131,208, with cantonments), SHĀHJAHĀNPUR (76,458, with cantonments), MORĀDĀBĀD (75,128), AMROHA (40,077), SAMBHAL (39,715), BUDAUN (39,031), PĪLĪBHĪT (33,490), CHANDAUSĪ (25,711), and NAGĪNA (21,412). The chief places of commercial importance are Bareilly, Shāhjahānpur, Morādābād, Pīlībhit, Chandausī, and TILHAR. Sugar and grain are dealt with also in many smaller places. Although ancient sites occur in many parts of the Division, RĀMNAGAR is the only one which has been even partially explored. BUDAUN and SAMBHAL were early seats of Muhammadan governors; and BAREILLY, PĪLĪBHĪT, RĀMPUR, and AONLA were important centres during the Rohilla rule in the eighteenth century. See ROHILKHAND.

**Bareilly District** (*Bareli*).—District in the Bareilly or Rohilkhand Division, United Provinces, lying between  $28^{\circ} 1'$  and  $28^{\circ} 54' N.$  and  $78^{\circ} 58'$  and  $79^{\circ} 47' E.$ , with an area of 1,580 square miles. It is bounded on the north by Nainī Tāl; on the east by Pīlībhit and Shāhjahānpur; on the south by Shāhjahānpur and Budaun; and on the west by Budaun and the State of Rāmpur. The District of Bareilly,

**Physical aspects.**

though lying not far from the outer ranges of the Himālayas, is a gently sloping plain, with no greater variety of surface than is caused by the shifting channels of its numerous streams. Water lies almost everywhere near the surface, giving it a verdure that recalls the rice-fields of Bengal. The most prominent physical feature is the RĀNGANGĀ River, which traverses the south-western portion. Its channel has a well-defined bank at first on the south, and later on the north; but except where the stream is thus confined, the *khādar* or lowland merges imperceptibly into the upland, and the river varies its course capriciously through a valley 4 or 5 miles wide, occasionally wandering to a still greater distance. North of the Rāngangā are numerous streams running south to meet that river. The chief of these (from west to east) are the Dojorā, which receives the Kichhā or West Bahgul, the Deoraniān, the Nakatiā, and the East Bahgul, which receives the Pangailī. The Deohā forms the eastern boundary for some distance. The gentle slope of the country makes it possible to use these rivers for irrigation in the upper part of their courses. Lower down, and more especially in the east of the District, they flow below the general level and are divided by elevated watersheds of sandy plains.

The District exposes nothing but alluvium, in which even *kankar*, or calcareous limestone, is scarce.

The flora resembles that of the Gangetic plain generally. In the north a few forest trees are found, the *semal* or cotton-tree (*Bombax malabaricum*) towering above all others. The rest of the District is

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Katehr again, and brought the country into final subjection to Musalmān rule, which was not afterwards disputed except by the usual local revolts. Under the various dynasties which preceded the Mughal empire, the history of Katehr consists of the common events which make up the annals of that period: constant attempts at independence on the part of the district governors, followed by barbarous suppression on the part of the central authority. The city of Bareilly itself was founded in 1527 by Bās Deo and Barel Deo, from the latter of whom it takes its name. It was, however, of small importance till the reign of Shāh Jahān, when it took the place of Budaun. In 1628 Alī Kulī Khān was governor of Bareilly, which had grown into a considerable place. In 1657 Rājā Makrand Rai founded the new city of Bareilly, cut down the forest to the west of the old town, and expelled all the Katehriyās from the neighbourhood. A succession of regular governors followed during the palmy days of the great Mughal emperors; but after the death of Aurangzeb, in 1707, when the unwieldy organization began to break asunder, the Hindus of Bareilly threw off the imperial yoke, refused their tribute, and commenced a series of anarchic quarrels among themselves for supremacy.

Their dissensions only afforded an opportunity for the rise of a new Muhammadan power. Alī Muhammad Khān, a leader of Rohilla Pathāns, defeated the governors of Bareilly and Morādābād, and made himself supreme throughout the whole Katehr region. In 1744 the Rohilla chieftain conquered Kumaun right up to Almorā; but two years later the emperor Muhammad Shāh marched against him, and Alī Muhammad was taken a prisoner to Delhi. However, the empire was too much in need of vigorous generals to make his captivity a long one, and in 1748 he was restored to his old post in Katehr. Next year he died, and a mausoleum at Aonla, in this District, still marks his burial-place. Hāfiz Rahmat Khān, guardian to his sons, succeeded to the governorship of Rohilkhand, in spite of the crafty designs of Safdar Jang of Oudh, who dispatched the Nawāb of Farrukhābād against him without effect. Hāfiz Rahmat Khān defeated and slew the Nawāb, after which he marched northward and conquered Pilibhīt and the *tarai*. The Oudh Wazīr, Safdar Jang, plundered the property of the Farrukhābād Nawāb after his death, and this led to a union of the Rohilla Afghāns with those of Farrukhābād. Ahmad Khān of Farrukhābād defeated Nawal Rai, the deputy of Safdar Jang, besieged Allahābād, and took part of Oudh; but the Wazīr called in the aid of the Marāthās, and with them defeated Ahmad Khān and the Rohillas at Fatehgarh and at Bisaulī, near Aonla. He then besieged them for four months at the foot of the hills; but owing to the invasion of Ahmad Shāh Durrānī terms were arranged, and Rahmat Khān became the *de facto* ruler of Rohilkhand.

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Abīchhattra or RĀMNAGAR is the only one of many ancient mounds in the District which has been explored. It yielded numerous coins and some Buddhist sculptures. It is still a sacred place of the Jains. The period of Rohilla rule has left few buildings of importance; but some tombs and mosques are standing at AONLA and BAREILLY.

There are 12 towns and 1,924 villages. Population has risen steadily during the last thirty years. The numbers at the last four enumerations were as follows: (1872) 1,015,041, (1881)

Population. 1,030,936, (1891) 1,040,949, and (1901) 1,090,117.

The District is divided into six *tahsils*—FARĪDPUR, BAREILLY, AONLA, MĪRGANJ, BAHERĪ, and NAWĀBGANJ—the head-quarters of each being at a place of the same name. The principal towns are the municipality of BAREILLY and AONLA. The following table gives the chief statistics of area and population in 1901 :—

<i>Tahsil.</i>	Area in square miles	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Farīdpur .	249	2	314	128,861	518	+ 7.6	2,635
Bareilly .	310	1	414	325,650	1,050	+ 9.1	17,111
Aonla .	306	3	320	211,836	692	+ 8.1	4,913
Mīrganj .	149	1	158	103,198	640	+ 8.3	1,225
Baherī .	345	2	410	193,412	561	- 6.6	2,522
Nawābganj .	221	3	308	127,160	575	+ 2.2	1,404
District total	1,580	12	1,924	1,090,117	690	+ 4.7	29,810

Hindus form 75 per cent. of the total and Musalmāns 24 per cent., while Christians number 7,148 and Aryas 1,228. The density is much higher than the Provincial average, and the rate of increase between 1891 and 1901 was larger than in most parts of the United Provinces. More than 99 per cent. of the population speak Western Hindī, the ordinary dialect being Braj.

The most numerous Hindu caste is that of Chamārs (leather-workers and cultivators), 100,000. Other castes numerically strong in this District are: Kurnīs (agriculturists), 94,000; Muraos (market-gardeners), 73,000; Kisāns (cultivators), 67,000; and Kahārs (cultivators and water-carriers), 56,000. Brāhmans number 48,000 and Rājputs 38,000. Ahars, who are found only in Rohilkhand, but are closely allied to the

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decrease in the north of the District owing to vicissitudes of the seasons. The principal changes in cultivation have been directed towards the substitution of more valuable crops for inferior staples. The area under *bājra* has decreased, while sugar-cane, rice, and maize are more largely grown. Poppy has been reintroduced recently, and the area sown with it is increasing. A rise in the area producing barley and gram points to an increase in the area double cropped. Very few loans are taken under the Land Improvement Loans Act; between 1890 and 1903 the total amounted to Rs. 41,000, of which Rs. 38,000 was advanced in the famine year, 1896-7. Nearly 1½ lakhs was lent under the Agriculturists' Loans Act, of which Rs. 63,000 was advanced in 1896-7. In good seasons the advances are small.

<i>Tahsil.</i>	Total.	Cultivated.	Irrigated.	Cultivable waste.
Farīdpur . . .	249	196	34	19
Bareilly . . .	310	240	50	20
Aonla . . .	306	240	56	27
Mīrganj . . .	149	111	17	14
Baherī . . .	315	258	44	31
Nawābganj . .	221	178	55	12
Total	1,580	1,223	256	123

The cattle used for agricultural purposes are chiefly bred in the District or imported from the neighbouring submontane tracts, those bred in Pilibhīt being called *panwār*. These varieties are small but active, and suffice for the shallow ploughing in vogue. Stronger animals, used in the well-runs in the south-west of the District, are imported from west of the Jumna. Horse-breeding is confined to the Rāmgangā and Aril basins, where wide stretches of grass and in some places a species of *Oxalis* resembling clover are found. Four pony and two donkey stallions are maintained by Government and by the District board, and two donkey stallions are kept on estates under the Court of Wards to encourage mule-breeding. There has, however, been little progress in either horse or mule-breeding. Sheep are not kept to any great extent.

The soil of the District is generally moist, and in ordinary seasons there is very little demand for irrigation of the spring crops. In the north, where a regular supply of water is valued for rice and sugar-cane, the Rohilkhand canals are the main source. Elsewhere, wells, rivers, and *jhīls* are used. In 1903-4 canals and wells supplied 76 and 75 square miles respectively, tanks or *jhīls* 58, and other sources (chiefly rivers) 47. The canals are all small works and may be divided into two classes. Those drawn from the Bahgul, Kailās, Kichhā, and Paha have permanent masonry head-works, with channels dug to definite sections, and are provided with subsidiary masonry works, regulators,

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The soil of the District is generally moist, and in ordinary seasons there is very little demand for irrigation of the spring crops. In the north, where a regular supply of water is valued for rice and sugar-cane, the Rohilkhand canals are the main source. Elsewhere, wells, rivers, and *jhils* are used. In 1903-4 canals and wells supplied 76 and 75 square miles respectively, tanks or *jhils* 58, and other sources (chiefly rivers) 47. The canals are all small works and may be divided into two classes. Those drawn from the Bahgul, Kailās, Kichhā, and Paha have permanent masonry head-works, with channels dug to definite sections, and are provided with subsidiary masonry works, regulators,

grounds for cattle are within easy reach. In 1803-4 distress was felt, and the spring crops were grazed by the cattle as no grain had formed. In 1819 and 1825-6 there was scarcity. The famine of 1837-8 followed a succession of bad years, and its effects were felt, but not so severely as in the Doāb. While famine raged elsewhere in 1860-1, Bareilly suffered only from slight scarcity, owing to the failure of the autumn harvest; and relief works, which were opened for the first time, alleviated distress. Relief works were also necessary in 1868-9, 1877-8, and 1896-7, but the numbers attracted to them never rose very high.

The Collector is usually assisted by a member of the Indian Civil Service, and by four Deputy-Collectors recruited in India. There is a *Administration.* *tahsildār* at the head-quarters of each *tahsil*. The Executive Engineer of the Rohilkhand division (Roads and Buildings) and the Executive Engineer of the Rohilkhand Canals are stationed at Bareilly city.

There are three regular District Munsifs and a Subordinate Judge, and the appointment of Village Munsifs commenced recently. The District and Sessions Judge of Bareilly has civil and criminal jurisdiction in both Bareilly and Pilibhīt Districts. Crime is very heavy, especially offences affecting life and grievous hurt. Religious feeling runs high, and quarrels between Hindus and Muhammadans, accompanied by serious rioting, are not infrequent. The thieving caste of Daleras has already been mentioned. Female infanticide is now very rarely suspected, and in 1904 only 130 names remained on the registers of proclaimed families.

Under the Rohillas proprietary rights did not exist, and villages were farmed to the highest bidder. After annexation in 1801 Rohilkhand was divided into two Districts, Morādābād and Bareilly. Shāh-jahānpur District was formed in 1813-4; Budaun was carved out of both the original Districts in 1824; the south of Nainī Tāl District was taken away in 1858, and sixty-four villages were given, as a reward for loyalty, to the Nawāb of Rāmpur. Pilibhīt was made a separate District in 1879. In the early short-term settlements the Rohilla system of farming was maintained till 1812, when proprietary rights were conferred on persons who seemed best entitled to them. The demand then fixed was so high that heavy balances were frequent, and many estates were abandoned. A more enlightened method of settlement based on a survey was commenced under Regulation VII of 1822, and the first regular settlement followed under Regulation IX of 1833. Different methods were adopted by the officers who carried this out. Some divided each village into circles according to soil and situation, while others classified villages according to their general condition as a whole. Rent rates were sometimes assumed for the various soils, while in other cases general revenue rates were deduced from the collections

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6,675. In 1903-4 there were 196 such institutions, with 9,636 pupils, of whom 996 were girls, besides 163 private schools with 2,479 pupils. Of the total, 3 were managed by Government, and 136 by the District and municipal boards, while 55 were aided. There is an Arts college at Bareilly city. In 1903-4 the expenditure on education was a lakh, of which Rs. 53,000 was derived from Local and municipal funds, Rs. 23,000 from fees, and Rs. 12,000 from Provincial revenues.

There are 13 hospitals and dispensaries, with accommodation for 287 in-patients. In 1903 the number of cases treated was 114,000, of whom 3,068 were in-patients, and 2,815 operations were performed. The expenditure was Rs. 30,000, most of which was met from Local and municipal funds. There is a lunatic asylum at Bareilly city with about 400 inmates.

In 1903-4 the number of persons successfully vaccinated was 36,000, representing a proportion of 33 per 1,000 of the population. Vaccination is compulsory only in Bareilly city.

[*District Gazetteer* (1879, under revision); S. H. Fremantle, *Settlement Report* (1903).]

**Bareilly Tahsīl.**—Central *tahsīl* of Bareilly District, United Provinces, conterminous with the *pargana* of Karor or Bareilly, lying between 28° 13' and 28° 37' N. and 79° 14' and 79° 38' E., with an area of 310 square miles. Population increased from 298,482 in 1891 to 325,650 in 1901. There are 414 villages and one town, BAREILLY (population, 131,208), the District and *tahsīl* head-quarters. The demand for land revenue in 1903-4 was Rs. 2,71,000, and for cesses Rs. 48,000. The high density of population, 1,050 persons per square mile, is due to the inclusion of a large city. There is some poor soil, but the tract across which the Rāmgangā flows in a constantly varying channel is generally fertile. Five smaller streams flow from north to south and are used for irrigation. Sugar-cane is the most valuable crop, and is largely grown, while sugar is refined at many places, especially in Bareilly city. In 1903-4 the area under cultivation was 240 square miles, of which 50 were irrigated. Small canals drawn from the East Bahgul river irrigate 6 or 7 square miles, and wells 15 or 20. Tanks or *jhīls* and rivers supply the remainder.

**Bareilly City** (*Bareli*).—Administrative head-quarters of the Bareilly Division and District, United Provinces, with a cantonment, situated in 28° 22' N. and 79° 24' E., 812 miles by rail from Calcutta and 1,031 from Bombay. It lies at the junction of a branch of the Oudh and Rohilkhand Railway from Aligarh with the main line; and these are met by the narrow-gauge railways from Lucknow through Sitāpur, from Kāthgodām at the foot of the hills, and from Soron through Budaun. Population has increased steadily. The numbers at the last four enumerations were as follows: (1872) 102,982, (1881) 113,417, (1891)

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to architectural beauty. The oldest building of any importance is the tomb of Hāfiz Rahmat Khān, close to the city on the Aonla road, which is an elegant building of plastered brick with gilded finials. It was built by his son in 1775 and repaired by his daughter in 1839, and was again repaired in 1891-2 at the cost of Government. The finest public buildings are the dispensary and Dufferin Hospitals, the *tahsīlī* and chief police station, and a triangular building containing the municipal hall, a literary institute, and the honorary magistrates' courthouse. The Central jail is situated north of the city on the Nainī Tāl road. South of the city lies the civil station, which contains the high school, the American Methodist Orphanage and Theological Seminary, the District offices and District jail, and several churches. The cantonment lies south of the civil station, and contains a small fort built after the disturbance of 1816. The usual garrison consists of British artillery, British and Native infantry, and Native cavalry. Bareilly is the head-quarters of the Commissioner of the Division, and of the Executive Engineers of the Rohilkhand Canals and Rohilkhand division (Roads and Buildings).

A municipality was constituted in 1858, which in 1901 had a population of 117,380. During the ten years ending 1901 the income and expenditure averaged 1·2 lakhs. In 1903-4 the income was 2·1 lakhs, chiefly from octroi (1·5 lakhs). The expenditure of 2·2 lakhs included public works (Rs. 42,000), conservancy (Rs. 33,000), public safety (Rs. 31,000), and administration and collection (Rs. 19,000). An excellent water-supply is drawn from wells. In 1903-4 the income of the cantonment fund was Rs. 48,000, and the expenditure Rs. 49,000.

The chief industry of the city is sugar-refining, and about 20,000 tons of raw sugar are imported annually, while 10,000 tons of sugar are exported by rail alone. Bareilly is also noted for its furniture, made both of bamboo and of the ordinary timbers in use for this purpose. Cloth is woven and brass vessels are made; but these industries are not very important. The Rohilkhand and Kumaun Railway workshops employ about 80 hands, and there is a dairy farm in connexion with the lunatic asylum. The principal educational institution is the college, which contains 104 students. A new building for this institution will be erected shortly on a site in the civil station presented by the Nawāb of Rāmpur. The District school has about 450 pupils and the *tahsīlī* school 370. The municipality maintains 21 schools and aids 3 others, with a total attendance in 1904 of 2,321. There are also three orphanages, maintained by the Arya Samāj, the American Methodist Mission, and a Muhammadan Association.

**Bareil.**—Hill range in Cāchār District, Eastern Bengal and Assam. See BARAIL.

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**Barhaj.**—Town in the Deoriā *talhsīl* of Gorakhpur District, United Provinces, situated in  $26^{\circ} 17' \text{ N.}$  and  $83^{\circ} 45' \text{ E.}$ , at the terminus of a branch of the Bengal and North-Western Railway, and near the confluence of the Rāptī and Gogra. Population (1901), 10,054. The town is said to have been founded about 1770, but only rose into importance with the introduction of sugar cultivation in the neighbourhood. It is now the most important trade centre in the District, and is also remarkable for its filthiness. Grain, oilseeds, and sugar are largely exported by rail and river, and the insurance of the river traffic is part of the business of the town. Sugar is manufactured in about forty factories. The banks of the Rāptī are covered with immense piles of timber—part for re-exportation, part for boat-building, and part for fuel in the factories. The town is administered together with GAURĀ under Act XX of 1856, with an income of about Rs. 3,400. The Rājā of Majhauī collects octroi duties and bazar dues under (United Provinces) Act III of 1901, and pays Rs. 3,500 annually to the town fund. Barhaj contains a flourishing town school with 183 pupils, a girls' school with 26, and a dispensary.

**Barhalganj.**—Town in the Bānsgaon *talhsīl* of Gorakhpur District, United Provinces, situated in  $26^{\circ} 17' \text{ N.}$  and  $83^{\circ} 30' \text{ E.}$ , on the north bank of the Gogra, and on the road from Gorakhpur to Azamgarh. Population (1901), 5,181. It is composed of a street of masonry shops lining the sides of the road, with a fine metalled market-place. The trade consists chiefly in the export of grain, and in the distribution of imported goods, but there is also some manufacture of sugar. Barhalganj is a port of call for the river steamers. It is administered under Act XX of 1856, with an income of about Rs. 1,100. It contains a town school with 113 pupils, a girls' school with 14, and a dispensary.

**Barhampur.**—Subdivision and town of Murshidābād District, Bengal. See BERHAMPORE.

**Bāri Town.**—Head-quarters of the district of the same name in the State of Dholpur, Rājputāna, situated in  $26^{\circ} 39' \text{ N.}$  and  $77^{\circ} 37' \text{ E.}$ , about 19 miles almost due west of Dholpur railway station and 45 miles south-west of Agra. Population (1901), 11,603. A strong masonry fort here is supposed to have been built in the fifteenth century, but the oldest building is a mosque which bears an inscription recording that it was constructed between 1346 and 1351. Three miles to the south-east are the remains of a palace, built about 1617 for prince Shāh Jahān as a shooting lodge. In the vicinity of the town are sandstone quarries, which are being connected with the railway at Dholpur by a light steam tramway. The town possesses a post office, a primary vernacular school attended by 60 boys, and a dispensary.

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**Bārind.**—Elevated tract in Eastern Bengal and Assam, occupying a considerable area on the confines of the Districts of Dinājpur, Mālda, Rājshāhi, and Bogra. It derives its name from the old Hindu kingdom of BĀRENDRA. It belongs to an older alluvial formation than the surrounding country, and is composed of argillaceous beds of a rather pale reddish-brown hue, often weathering yellowish, in which *kankar* and pisolitic ferruginous concretions frequently occur. It is covered in many places with a scrub jungle, the predominant tree being the *sāl* (*Shorea robusta*). It is now being reclaimed by the Santāls, Mundās, and Oraons, large numbers of whom have immigrated into this tract, attracted by the prospect of holding their new clearances rent-free for a few years. As soon as rent is demanded, they move on, leaving the fields they have cleared to be occupied by the less hardy Hindu cultivators, who have not the energy to clear land for themselves.

**Baripādā.**—Capital of Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in 21° 56' N. and 86° 44' E., on the Burhābalang river. Population (1901), 5,613. Baripādā is connected by a light railway (2 feet 6 inch gauge) with Rupsā junction on the Bengal-Nāgpur Railway, and by metalled roads with Bahalda and Karanjīā, the headquarters of the Bāmanghāti and Pānchpīr subdivisions, and with the towns of Balasore and Midnapore; several fair-weather roads run from it to other parts of the State. It is the seat of the administration, and contains the residence of the chief, a good dispensary, and a high school, besides criminal and civil courts, and a jail.

**Barī Sādri.**—Principal town of an estate of the same name in the State of Udaipur, Rājputāna, situated in 24° 25' N. and 74° 29' E., about 50 miles east by south-east of Udaipur city. Population (1901), 4,063. On a hill to the south is a small fort, now almost in ruins. The estate, which is held by the senior noble of Mewār, who is styled Rāj,

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well-kept streets, the river-side road to Sāgardī being bordered by fine avenues; and it is intersected by numerous creeks, which are flushed twice a day at flood tide, and add much to the healthiness of the town. There are numerous tanks, of which four, unconnected with the river, are reserved for drinking purposes; a scheme to supply filtered water is under consideration.

In addition to the usual public offices and the jail, the town contains three churches belonging to the Anglican, Roman Catholic, and Baptist denominations, and a public library founded in 1855. The District jail has accommodation for 580 prisoners, who are employed on oil-pressing, brick-pounding, brick-making, carpet and mat-making, weaving, and bamboo work. A first-grade college teaches up to the B.A. standard. A District school is controlled by a joint committee of the municipality and District board, and two girls' schools are maintained respectively by the Baptist Zanāna Mission and by subscriptions; a technical school is affiliated to the District school. There are five printing presses, and three vernacular newspapers are published in the town.

**Bāriya State** (*Deogarh Bāriya*).—Tributary State in Rewā Kāntha, Bombay, lying between  $22^{\circ} 21'$  and  $22^{\circ} 58'$  N. and  $73^{\circ} 41'$  and  $74^{\circ} 18'$  E., with an estimated area of 813 square miles. It is bounded on the east and west by the British District of the Pānch Mahāls; on the north by the State of Sanjeli; and on the south by the State of Chota Udaipur. The extreme length, from north to south, is 39 miles. The country is hilly in the south and east, but flat in the west, and is divided into seven subdivisions—Randhikpur, Dudhia, Umāria, Haveli, Kākadkhila, Sāgtāla, and Rājgarh. Much of it is covered with forest. The climate is damp and unhealthy, fever being the prevailing disease.

The chiefs of Bāriya are Chauhān Rājputs, who are said to have been driven south by the advance of the Musalmāns about the year 1244, and to have taken possession of the city and fort of CHĀMPĀNER. Here they ruled till defeated by Mahmūd Begara in 1484, and forced to retire to the wilder parts of their dominions. Of two branches of the family, one founded the house of Chota Udaipur and the other the house of Bāriya. The connexion of this State with the British dates from 1803, when, in consequence of the help given by the chief to the British army in their operations against Sindhia, the Government subsidized a detachment of Bāriya Bhils at a monthly cost of Rs. 1,800. The State formed part of the Central India Agency up to 1825, when it was transferred to Bombay. The title of the chief is Mahārāwal of Deogarh Bāriya, and he is entitled to a salute of 9 guns. He holds a *sanad* authorizing adoption. Succession follows the rule of primogeniture.

The Census of 1901 showed a population of 81,579, or 100 persons per square mile, living in 483 villages. Hindus numbered 79,149, and Musalmāns 2,301. The chief castes are Bhils, Kolis, and Naikdas

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and bordering the Punjab, with an area of 1,317 square miles. The population in 1901 was 14,922, an increase of 4,276 on the rough estimate made in 1891. The head-quarters station, which bears the same name as the *tahsīl*, is about 3,650 feet above sea-level. The number of villages is 114. The land revenue in 1903-4 amounted to Rs. 47,000. The frequent existence of occupancy rights is a special feature of the tenures of the *tahsīl*. In the Leghāri-Bārkhān circle, one-third of the revenue levied is paid to the Leghāri chief as superior proprietor of the soil, and he holds a revenue-free grant up to 1907. Bārkhān rugs are well-known, but have recently deteriorated in quality.

**Barkhera.**—The name of four *Thakurāts* in Central India: two in the BHOPĀWAR AGENCY, distinguished as Mota and Chhota, and two in the MĀLWĀ AGENCY, known as Deo Dugrī and Panth.

**Bārkūr.**—Village in the Udipi *tāluk* of South Kanara District, Madras, situated in 13° 29' N. and 74° 48' E. The traditional capital of Tuluva, the country of Tulu-speaking people, it was long the local seat of the representatives of the Hoysala Ballālas of Dorasamudra, who were Jains by religion. The local rulers attained practical independence during the twelfth and thirteenth centuries, the most powerful of them being named Bhūtāl Pāndya (*circa* A.D. 1250), confounded by some with the Bhūtāl Pāndya to whom is ascribed the Aliya Santāna law of inheritance peculiar to the west coast, the origin of which is really much earlier. When the Vijayanagar kingdom was founded in 1336, Harihara, its first ruler, stationed a viceroy called the Rāyaru here and built a fort, remains of which are still to be seen. On the fall of Vijayanagar the Bednūr kings asserted their authority; and in the ensuing struggle the Jains were almost extirpated and Bārkūr was destroyed. Ruined tanks and Jain shrines and sculptures still abound, but its importance has vanished and not one Jain house remains.

**Barliyār.**—Village in the Coonoor *tāluk* of the Nīlgiri District, Madras, situated in 11° 20' N. and 76° 50' E., 6½ miles from Coonoor, and half-way down the *ghāt* road from Coonoor to Mettupālaiyam. Population (1901), 2,234. Mr. E. B. Thomas, a former Collector of the District, started a private garden here in 1857, which was afterwards taken over by Government for Experiments in tea cultivation and in the growth of medicinal plants, ~~themphor~~, rubbers, &c., which like a warm, damp climate at a moderate elevation, have been made. The garden, which is the only one of its kind in the Presidency, is in charge of the Curator of the Government Gardens at Ootacamund.

**Barmanda.**—Petty State in MAHĪ KĀNTHA, Bombay.

**Barmer.**—Head-quarters of the Mallāni district in the State of Jodhpur, Rājputāna, situated in 25° 45' N. and 71° 23' E., on the Jodhpur-Bikaner Railway. Population (1901), 6,064. The present town is said to have been founded in the thirteenth century by a

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*nizāmat*, Patiāla State, Punjab, situated in  $32^{\circ} 23' N.$  and  $75^{\circ} 37' E.$ , 52 miles west of Patiāla, on the Rājputra-Bhatinda branch of the North-Western Railway. Population (1901), 6,905. Rebuilt in 1722 by Ala Singh, Rājā of Patiāla, it remained the capital of the State until the foundation of the town of Patiāla in 1763, and the hearths of its founder are still revered by the people. It is built in the form of a circle, and surrounded by a wall of masonry, within which is a fort. Lying in the centre of the Jangal tract, it is a mart for the export of grain, and the State has constructed a large market to foster its development. The town contains a dispensary, an Anglo-vernacular middle school, and a police station.

**Baro** (or Barnagar).—Village and ancient site in the Gwalior State, Central India, lying in  $23^{\circ} 56' N.$  and  $78^{\circ} 14' E.$  Baro is now only a small village, with a population (1901) of 533; but the neighbourhood is covered with the remains of an ancient city of considerable size, the ruins extending to the neighbouring town of Pathāri. The principal remains consist of Hindu and Jain temples, chiefly situated close to a large tank, the waters of which are held up by a fine old stone dam. The village stands at the foot of the Gayanāth hill, a part of the arm of the Vindhya which strikes north from Bhilsa. The sandstone and shales of the Vindhya series are well exposed here, and the former has been employed in constructing the temples and houses of Baro. The finest building is the Gadarmal temple, on the western bank of the tank; and though the existing structure is a restoration of the original shrine, as the heterogeneous nature of its spire shows, it is still a magnificent example of mediaeval Hindu architecture. The shape of the sanctuary is interesting, being oblong instead of square, and within it is an unusually fine sculptured figure. The temple formerly stood in a spacious courtyard and was surrounded by seven smaller shrines, now mere heaps of bricks. The entrance to the courtyard lay through a lofty gate of which one richly carved pillar is still standing. The temples in this group are all Saivite, there being no Jain sculptures, as Cunningham has erroneously stated. The other large temple is called the Jain Mandir, and has evidently been restored by Jains from the remains of a Hindu building. It is entirely enclosed by a high wall, in the centre of which there is a *samādhi* or ascetic's tomb. A gallery runs round all four sides, the shrines, which number eighteen in all and are of various sizes, lying behind it. Six spires and several domes surmount the building, and have been made up of the remains of Hindu and Jain temples, carved with images peculiar to each religion. The cells, however, contain only Jain images. Tradition relates that Baro was once a large and wealthy city, but was destroyed at the end of the seventeenth century by Chhatarsāl, the chief of Pannā, who sacked the town. It is, however, impossible that a Hindu should

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The wild animals to be found in the Baroda State are the same as those of Gujarāt : namely, tiger, leopard, bear, hog, wolf, hyena, jackal, fox, *sāmbār*, spotted deer, barking-deer, *chinkāra*, *nīlgai*, antelope. Monkeys abound. Under game-birds may be noticed : the spur-winged goose, the common grey goose, wild duck, teal, peafowl, sand-grouse, partridge, quail, snipe, bustard, florican, plover, &c. Fish are to be found in great abundance in the Mahī and the Narbadā. Inland in the Navsāri division fishing is carried on in the Pūrna, Mindhola, and Ambikā rivers.

In the Baroda *prānt* the hottest months are May and June, when the maximum temperature is about 105°, though occasionally it rises to 107° or even to 110°. The minimum temperature during this period is about 80°. The rainy season usually sets in about the middle or latter part of June, and ends in October. During this period the climate is hot, moist, and very relaxing, with a maximum temperature of about 86° and a minimum of 78°. The cold season, which commences in November and lasts for about four months, is dry and cool, the average maximum being about 90° and the minimum 50°. The coldest months are generally December and January, while the most unhealthy are September and October. The Kadi *prānt* is the healthiest division of the State. In the hot season the temperature here is high, the average maximum being about 100° and the minimum 72°; but the rainy season is pleasantly moist and cool, forming a great contrast to the Baroda division. Moreover, Kadi enjoys a moderately good cold season, lasting from November till the middle of February, with a maximum temperature of about 90° and a minimum of 51°. In the *vsāri prānt* a distinction must be drawn between the *rāni* or forest *hāls* of Mahuva, Vyāra, Songarh, and part of Velāchha, which are

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Pilāji Gaikwār, who may be considered as the founder of the present ruling family, obtained the command of a *pāga*, and thereafter distinguished himself by his incursions into Gujarāt. But in consequence of internal dissensions he was obliged to remove to Songarh, and it was from here that he conducted his future raids. Not only was Songarh, therefore, the cradle of the Gaikwār house, but it continued to be their head-quarters till 1766. For several years Pilāji, aided by other Marāthā chiefs, invaded and exacted tribute from the Surat *atthāvisi* or 'twenty-eight subdivisions.' In 1723 he marched on Surat itself, defeated the governor, and from that time began regularly to levy tribute in Gujarāt. Help was afterwards afforded him by the Desais of Pādra, Chhani, and Bhayali, by whose assistance he was enabled to direct his ravages as far as the Mahī river. In 1725, after establishing his claim to the districts south of the Mahī—namely, Baroda, Nāndod, Chāmpāner, Broach, and Surat—he returned to his stronghold of Songarh, while at about the same time his superior, the Senāpati, established himself at Dabhoi, not far from Baroda, making this place, which had been captured by Pilāji, his regular head-quarters. Reverses now began to befall the Marāthas, and for a time they almost lost the hold they had gained over Gujarāt. Pilāji himself was forced to fly to Cambay, and thereafter to Sorath. But the Muhammadan viceroy, Sarbuland Khān, owing to want of succour from Delhi, rapidly lost ground in his turn, and was obliged to cede to Pilāji a share in the *chauth* of the districts south of the Mahī. On the other hand, as Pilāji was the agent of the Peshwā's rival the Senāpati, the Peshwā directed his own adherent, the Ponwār, to drive Pilāji out. Sarbuland Khān now came to terms with Peshwā Bāji Rao, and promised him the *chauth* and *sardeshmukhi* (an additional tenth), on condition that the Peshwā should support him against Pilāji and other Marāthā leaders. Notwithstanding this, in 1727 Pilāji succeeded in capturing both Baroda and Dabhoi. The next event that happened was that Sarbuland Khān's grants to the Peshwā were not ratified at the Delhi court, and he was replaced as viceroy in 1730 by Abhai Singh, Rājā of Jodhpur. As soon as the latter was in power, Bāji Rao concerted with him to oppose Pilāji, and, if possible, to turn him out of Baroda. For this purpose the Peshwā advanced to lay siege to that town in 1731.

Gujarāt. Khande Rao was some time afterwards present at the battle of Bālāpur, where his troops behaved with great bravery; and it was on this occasion that one of his officers, Dāmāji Gaikwār, distinguished himself so much that he obtained the title of Shamsheer Bahādur, or the 'illustrious swordsman,' a title which has been borne by the Gaikwārs ever since. In 1721 Khande Rao and Dāmāji both died, the former being succeeded by his son Trimbak Rao, and the latter by his nephew, Pilāji.

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Dāmāji Gaikwār was one of the many great Marāthā chiefs who marched to fight Ahmad Shāh Durrāni, and in the fatal struggle which took place on the plain of Pānīpat (1761) he and his troops distinguished themselves highly. He was fortunate enough to escape death, and to make an honourable return to Gujarāt. There he continued with undiminished vigour to crush the combined efforts of the Musalmāns, who had hoped to win something by the great disaster which had befallen the Marāthās. It was shortly after this that Dāmāji transferred his capital from Songarh to Pātan (the ancient Anhilvāda). Between 1763 and 1766 he took possession of almost the whole of what is now the Kadi *prānt*, and thereafter added very considerably to his power and revenue by conquests in Kāthiāwār. He also levied tribute on the States of Idar and Rājpipla. The disaster at Pānīpat was shortly followed by the death of the Peshwā Bālāji, when the rule passed to the youthful Mādhava Rao, who was soon thwarted by his ambitious uncle, Raghunāth Rao (Raghuba), with whom Dāmāji elected to make a close alliance. But in 1768 Mādhava Rao defeated the allies at Dhodap, and captured Raghunāth Rao and Dāmāji's son, Govind Rao. The most

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adjoining, which had been handed over by the Mārāthās in virtue of the Treaty of Purandhar (1776); but his efforts were unsuccessful. In 1779 a second war broke out between the Poona Regency and the British, and Fateh Singh entered into an alliance with the latter. This was ratified by a treaty made at Kandila (Dabhoi) in January, 1780, by the terms of which Fateh Singh was to become independent of the Peshwā, and was to retain his own share of Gujarāt, while the British took the Peshwā's portion. This arrangement was afterwards virtually cancelled by the Treaty of Sālbai. In February, 1780, Holkar and Sindhia, as the Peshwā's allies, crossed the Narbadā and attacked Dabhoi, a town which was bravely defended by Mr. James Forbes (well-known as the author of the *Oriental Memoirs*). The war afterwards dragged on without any decided results, Fateh Singh remaining faithful to the British, notwithstanding the efforts of Sindhia to win him over. It was concluded by the Treaty of Sālbai (May, 1782), the general effect of which was to leave the Gaikwār in his old position. He retained what he had before the commencement of the war, but he was for the future to pay tribute to Poona as usual. Fateh Singh died in December, 1789.

In spite of the remonstrances of Govind Rao, another brother, Mānāji, at once assumed the reins of government, and paid a large sum to Poona as *nazar*. Sindhia, however, supported the cause of Govind Rao, and the rivalry between the brothers was kept alive until Mānāji's death, which occurred in August, 1793. The imbecile Sayāji Rao had died in the previous year. Govind Rao was now allowed to assume, or rather to purchase, the title of Sena Khās Khel. The demands made by the Poona court were so heavy that the Company was compelled to interfere in order to prevent the dismemberment of the Baroda State. Before entering his capital, Govind Rao had one more struggle, for a rebellion was raised against him by his own illegitimate son, Kanhoji. The latter was, however, betrayed by his own forces, and was obliged to surrender to his father. Afterwards he escaped and was joined in a fresh insurrection by Malhār Rao, the son of Khande Rao, previously mentioned, who had died in 1785. But the two quarrelled, Kanhoji was again betrayed and imprisoned, and Malhār Rao was forced to purchase peace. The matter of greatest interest which occurred during the rule of Govind Rao was his campaign against Aba Shelukar, who had been entrusted with the revenue management of the Ahmadābād district on behalf of the Peshwā. Several engagements took place, and finally Shelukar was betrayed by his own troops and imprisoned at Baroda. Hostilities now ceased, and the Peshwā in 1799, for the first time, leased the Ahmadābād territory to the Gaikwār. Shortly afterwards, in September, 1800, Govind Rao died.

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A confederacy of the great Marāthā chiefs had now been formed, and the Peshwā was tampering with Fateh Singh, while his agents were causing disturbances in Kāthiāwār. The question of the Peshwā's claims on the Gaikwār was opened afresh, and matters proceeded so far that every preparation for war between the British and the Peshwā had been made, when the latter suddenly gave way, the result being that a treaty was signed at Poona in 1817. Under this the Gaikwār became independent of the Peshwā, who surrendered all past claims for an annual payment of 4 lakhs, the tribute of Kāthiāwār was ceded to the British, and Ahmadābād was farmed in perpetuity to the Gaikwār for  $4\frac{1}{2}$  lakhs per annum. In November of the same year a supplemental treaty was entered into with the Gaikwār, by which the latter consented to make additions to the Subsidiary force, ceded his share of Ahmadābād on payment of its estimated value, and obtained the province of Okhāmandal and the island of Beyt, &c. It is unnecessary to describe here the wars which ensued almost immediately with Bājī Rao Peshwā, the Rājā of Nāgpur, the Pindāri hordes, and Holkar, during which Fateh Singh behaved as a staunch ally of the British. The reward for his valuable aid was the remission of the tribute of 4 lakhs, due to the Peshwā, whose power was now destroyed. Shortly afterwards, in 1818, Fateh Singh died, and was succeeded in the regency by his younger brother, Sayāji Rao. Anand Rao himself died in 1819, and Sayāji Rao ruled in his own name.

In 1820 the commission, which, with the Resident at its head, had carried on the administration during the reign of Anand Rao, was abolished, and the Gaikwār appointed two Ministers, but, as he trusted neither, employed Mīr Sarfarāz Alī to watch them both. The State was, however, in great pecuniary embarrassment; and as the Gaikwār refused to follow the advice of the Resident, affairs, both financial and political, rapidly grew worse. After much delay Sayāji Rao consented to the issue of septennial leases of the *mahāls* to respectable men, instead of annual leases to persons of doubtful means and position. The intrigues which followed the adoption of this reform led to the dismissal of one of the Ministers and the appointment of two joint Dīwāns. In 1828 Sir John Malcolm, Governor of Bombay, issued a proclamation announcing the temporary sequestration of Petlād, Dabhoi, Kadi, Amreli, &c., the annual value of which was estimated at 10 lakhs. And again in 1830, districts to the annual value of about 10 lakhs were attached, in order to provide for the reorganization of the Contingent of 3,000 horse; but this second sequestration was disapproved by the Court of Directors in 1832, and the territory was restored. In 1831 Sir John Malcolm was succeeded by Lord Clare, who attempted by conciliatory measures to undo the consequences of his predecessor's severity. Steps were taken to satisfy the creditors

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a Commission of inquiry, which reported that the charge of general maladministration was proved. Malhār Rao was warned that he would be held responsible, and called upon to effect thorough reforms before the end of 1875. In consequence of the strained relations between the Resident and the Mahārājā, it was determined to appoint Colonel Sir Lewis Pelly, in place of Colonel Phayre, as Special Commissioner and Agent to the Governor-General. Meanwhile, in November, 1874, an attempt to poison Colonel Phayre was reported. Sir Lewis Pelly arrived in December and assumed the virtual direction of the administration. Inquiries were made into the poisoning case; and the Government of India issued a proclamation in January, 1875, notifying that the Gaikwār had been arrested, and that, pending the result of an investigation by a Commission, they had assumed the administration of the State. The Commission, which was presided over by Sir Richard Couch, Chief Justice of Bengal, was not unanimous in its finding. The three English members came to the conclusion that an attempt to poison Colonel Phayre had been instigated by Malhār Rao, while the three native members did not consider him guilty. It was finally decided, as stated in a proclamation issued in 1875, that the Mahārājā must be deposed, 'not because the British Government have assumed that the result of the inquiry has been to prove the truth of the imputation against His Highness, but because, having regard to all the circumstances relating to the affairs of Baroda from the accession of His Highness Malhār Rao, his notorious misconduct, his gross misgovernment of the State, and his evident incapacity to carry into effect necessary reforms,' the step was imperatively called for. In accordance with this resolution, Malhār Rao was at once deported to Madras, where he resided under the surveillance of a British officer until his death in 1893.

Jamnābai, widow of Khande Rao, returned to Baroda, and, with the consent of the Government of India, formally adopted as the son and heir of Khande Rao, with the name of Sayāji Rao, a boy of thirteen years of age, who was descended from a distant branch of the family. During his minority the administration was conducted by Rājā Sir T. Mādhava Rao as Dīwān, and great reforms were inaugurated in every branch of the service. The finances were restored to a healthy condition, an efficient revenue system was introduced, vexatious taxes were swept away, the judicial, police, medical, and educational departments were reorganized, the system of railways was widely extended, and public buildings were erected in all parts of the State. In 1881 Sayāji Rao, whose education had been carefully supervised by a European tutor, was formally installed and invested with full powers. He immediately commenced his career by entering vigorously into every detail of the administration, as will be described below. He

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general conclusions can be drawn from the results of the Census. Of the total population, children under the age of 5 formed only 10 per cent., those from 5 to 15 formed 25 per cent., adults between 15 and 40 formed 45 per cent., and those above 40 formed 20 per cent. These figures point to the effects of famine, and a comparison between the statistics of 1891 and 1901 shows still more clearly the disastrous nature of the decade. While the decrease in population at all ages was 19.2 per cent., the number of children under 10 fell by 35.6 per cent., and the number of persons over 60 by 40.6 per cent. The mean age for males is 23.56, and for females 23.76.

Except in the city of Baroda, no rules are in force requiring the registration of births or deaths, but it has been the custom for the police and *pāṭels* to make monthly reports through the *tāluka* officers to the Sanitary Commissioner. More effective regulations have, however, been made for the future. In 1899-1900 the recorded birth-rate was 13 per thousand, and the death-rate 54.5. That year was, however, one of great distress, and during the previous five years mortality had averaged only 17.7 per thousand. In 1904-5 the births reported were 22.3 per thousand and the deaths 24.7. More than half the deaths are ascribed to fever, but the diagnosis, as usual, is faulty. Guinea-worm is common in Okhāmandal and Kodinār. Epidemics of cholera and small-pox are not uncommon, and 39,300 deaths from the former and 6,300 from the latter disease were recorded in the decade ending 1900-1.

Plague made its first appearance in the latter part of 1897, and since that time has caused considerable ravages. By the end of 1904-5 the number of deaths due to this cause alone was 44,251, but here again the statistics are not very trustworthy. The worst year was 1903-4, in which nearly 15,000 deaths were recorded. In the beginning of the plague epidemic the measures resorted to by the State were much the same as those adopted in British territory. A great portion of the city of Baroda was evacuated, and the people were located in sheds erected in fields outside. Persons coming from other affected parts were quarantined for a minimum period of ten days. All houses were white-washed, and disinfectants were freely used. A similar course was adopted at Petlād, Navsāri, and other towns. But as forcible segregation and other coercive proceedings led to no appreciable benefit, the only preventive measures now in force are thorough cleansing, disinfection, and the distribution of medicine.

Males exceed females by 64,576, the former numbering 1,008,634 and the latter 944,058. This deficiency of females is a characteristic of Gujarāt generally. Taking the different religions, it appears that among the Hindus there are 929 females to every 1,000 males, among the Jains 951, among the Musalmāns 956, among the Christians 819,

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produce all kinds of *jarāyat* or 'dry' and *bāgāyat* or garden crops, while the crops raised on black soil are rice, cotton, *jowār*, wheat, *tuver*, *bājra*, and *adad*. Of these, rice and cotton flourish best, the remaining crops being deficient in out-turn and of inferior quality. In the Baroda *prānt*, Kāhnam is famous for its superior black soil, which produces cotton and rice in abundance. This soil requires no manure, and is not irrigated, so that garden cultivation does not exist. The *gorāt* soil is generally irrigated, and wherever this is possible it yields large returns. It is specially utilized for the growth of *bājra*. The best kind of *gorāt* is found near Petlād, in Charotar, and is especially suited to tobacco. In the Kadi *prānt* the soil is well adapted for the cultivation of poppy for opium, and in Amreli for the cultivation of cotton. The agricultural implements used in different parts of the State are of simple construction. They include the mattock (*kodālī*), the hoe (*kharpi*), the small plough (*hol*), the large plough (*nāgar*), and the sickle (*dātardu*). The small plough serves only to scratch up the surface of the soil. The *nāgar*, which resembles the *hol* in construction but is much heavier, is employed mostly in the cultivation of sugar-cane.

In the whole State 1,014,027 persons, or 52 per cent. of the total, are supported by agriculture, of whom 45 per cent. are actual workers and 55 per cent. are dependents. The proportion is lowest in the Amreli *prānt* (40.7 per cent.), as the soil here is difficult to work. It rises to 66.2 per cent. in Navsāri, because the only pursuit followed by the forest tribes, who are numerous there, is agriculture.

The principal crops are rice (*Oryza sativa*), *bājra* (*Pennisetum typhoideum*), *jowār* (*Sorghum vulgare*), wheat (*Triticum sativum*), *math* (*Phaseolus aconitifolius*), gram (*Cicer arietinum*), *adad* (*Phaseolus radiatus*), *tuver* (*Cajanus indicus*), *vāl* (*Dolichos Lablab*), *chola* (*Vigna Catiang*), *kodra* (*Paspalum scrobiculatum*), *nāgli* (*Eleusine coracana*), *bāvto* (*Panicum frumentaceum*), *banti* (*Panicum spicatum*), *vatana* (*Pisum sativum*), *mag* (*Phaseolus Mungo*), castor-oil (*Ricinus communis*), *til* (*Sesamum indicum*), rapeseed (*Brassica campestris*), poppy (*Papaver somniferum*), cotton (*Gossypium herbaceum*), *san-hemp* (*Crotalaria juncea*), tobacco (*Nicotiana Tabacum*), sugar-cane (*Saccharum officinarum*), maize (*Zea Mays*), and *kasumbo* (*Carthamus tinctorius*).

Rice is generally manured with from five to ten cartloads of cattle-dung per *bigha*<sup>1</sup>. When available, tank mud is used as manure at the rate of ten to fifteen cartloads per *bigha*. With this treatment, it is calculated that from the best rice soils a return of 12 cwt. per acre may be expected. The crop is sown in June and July, and harvested in November.

*Bājra*, which is the staple food of the people, is generally sown as a mixed crop, except in Amreli. The land is manured either every

<sup>1</sup> Seven *bighas* are equal to 4 acres.

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Tobacco is a staple produce of Petlād and the vicinity. It is grown in *gorāl* soil and requires frequent irrigation, as well as from twelve to fifteen cartloads of farm-yard manure per *bīgha*. In Petlād the crop can be grown continuously on the same field for some years; and then an interval of two years, during which rice or *bājra* is planted, must elapse before tobacco can again be sown. The yield is from 7 to 10 cwt. per acre. It is sown in nurseries in June, transplanted in about a couple of months, and cut in February or March.

Poppy is grown in Kadi. Land intended for this crop is generally left fallow for about four months and ploughed several times before the seed is sown. In some places, however, it is usual to take a crop of *bājra* before utilizing the land for poppy. Manure is applied at the rate of twelve to fifteen cartloads per *bīgha* every third year, and irrigation is necessary. The average yield is estimated at 12 lb. of crude opium per acre; but the out-turn is always a matter of uncertainty, as this crop is easily influenced by changes of weather. Poppy is sown in October or November, and the collection of the juice takes place in February and March.

During the rainy season various species of *Cucurbitaceae*, *suran* or elephant-foot, sweet potatoes, &c., are grown; but most garden crops mature in the cold season or early summer. Potatoes are planted in small patches near the large towns. They require manure in the form of cattle-dung, oilcake, and night-soil, and also irrigation. *Brinjāls* and chillies are cultivated wherever irrigation is available, the *brinjāls* of Kāthor being especially famous. Onions are abundant, a white variety being largely cultivated in the Amreli *prānt* at Kodinār. Garlic and radishes are plentiful everywhere. Ginger is largely grown in Baroda and Navsāri. For this crop it is found that bundles of rotten hemp form an excellent manure. Carrots are cultivated everywhere, and in some parts, chiefly in Amreli, are used exclusively for fodder. Various native vegetables are grown in abundance, and of late years tomatoes have been introduced. Among the chief fruits are the mango, plantain, pomegranate, pummelo, guava, pineapple, lime, custard-apple, fig, and melon.

A table attached to this article (p. 77) gives statistics of cultivation for a series of years. In 1904-5 the total cultivated area was 3,751 square miles, of which cotton occupied 24 per cent., and *bājra* and *jowār* about 20 per cent. each.

A State Agricultural department has been established, under a Director, to give assistance to the cultivators in all possible ways. A large farm, with a school attached, has been founded at Baroda, where assistant masters of vernacular schools are trained as agricultural teachers in village schools, a few officials are instructed in the principles of entomological research, and agriculture is taught to ordinary students.

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In many villages pasture land is set apart for cattle. Bullocks employed in heavy work are fed on hay, millet stalks, and sometimes gram. Cotton-seed is given to buffaloes to increase the supply of milk. Grass is generally abundant in all parts of the State; but in the recent famines it failed, and many cattle were lost. Fairs are held in a few places for the sale of cattle. The most important is the weekly fair at Baroda.

The two most prominent cattle epidemics are rinderpest and foot-and-mouth disease. The former proves fatal in nearly all cases, while the latter is not so dangerous. There are two veterinary dispensaries, at Baroda city and Mehsāna. The surgeons in charge are required to tour when cattle-disease breaks out, and give their advice and assistance. In 1904-5 the total number of animals treated in the dispensaries was 2,049.

With the exception of the black cotton soil, all the cultivable lands can be irrigated. The chief crops which require irrigation are tobacco, sugar-cane, poppy, and vegetables. Even the black cotton soil repays irrigation if water can be had at moderate depths.

The irrigation works constructed by the State include a number of tanks, with small distributing channels. Some of the larger works have not been successful, owing to deficient rainfall or the need for further storage reservoirs and other subsidiary works. The most important is a reservoir at Kadarpur in the Kadi *prānt*, which cost 3.8 lakhs, and will irrigate about 1,500 acres. The largest project is the Orsang weir in the Sankheda *tāluka*, which supplies a canal 6 miles long, and is designed to irrigate 20,000 acres. It has cost 5.2 lakhs up to the present, and the completed works will cost about 20 lakhs. Indigenous irrigation is chiefly carried on by means of wells, as very few tanks hold a considerable supply of water after the close of the cold season. The country is not wanting in streams; but most of them either run dry in the summer months, or fall so low that water cannot be conveyed by canals to the land. The usual water-lift is a large leathern bag containing about 16 gallons of water, which is drawn up by a pair of bullocks moving down an incline. Two men are required, one to drive

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Statistics of prices for a series of years are not available. There is little variation in different parts of the State. The following table gives average prices for the whole State, in seers per rupee:—

	Wheat.	Rice.	Bājra.	Jowār.
1902-3 .	11	9	16	18
1904-5 .	12	9	14	16

As far as material condition is concerned, the people of the *rāstī* (peaceful and populous) *mahāls* of Navsāri stand foremost. There are many well-to-do Pārsīs in this tract. Baroda comes next, while Kadi shows a little inferiority. As usual the Amreli *prānt*, and especially Okhāmandal, is the most backward. A middle-class clerk has a comfortable house, with decent furniture. His food is generally rice, *tuver*, wheat, and *bājra*, and he also partakes of milk and vegetables. His clothing, too, is good. The cultivators are not so well off. Their houses, even though sometimes large, are very scantily furnished and their food is poor. Their dress too is indifferent, consisting generally of *angarkhās* and *badans* (vests) of a coarse cloth called *jota*. The landless day-labourers are the worst off. Their usual food is *kodra* and *jowār*, their dress is ragged, and their abodes are poor.

Navsāri *prānt* contains the largest forest tract in the State. Smaller areas exist in Baroda and Amreli. In 1905 the total area 'reserved'

was 680 square miles, in addition to which there are

**Forests.** considerable stretches of grass land and scrub jungle not yet surveyed. All the forests may be classed as deciduous and mixed. The most important species of trees are *sāg* (*Tectona grandis*), *shīsham* (*Dalbergia Sissoo*), *tanach* (*Ougeinia dalbergioides*), *khair* (*Acacia Catechu*), *bīa* (*Pterocarpus Marsupium*), *sadād* (*Terminalia tomentosa*), *haladuan* (*Adina cordifolia*), *kalam* (*Stephegyne parvifolia*), *kagar* (*Acacia ferruginea*), *kati* (*Acacia modesta*), *dhaman* (*Grewia tiliaefolia*), *temru* (*Diospyros melanoxylon*), *bandaro* (*Lagerstroemia lanceolata*), *apta* (*Bauhinia racemosa*), *behedo* (*Terminalia belerica*), *kagdoli* (*Sterculia urens*), *babūl* (*Acacia arabica*), and bamboo (*Bambusa arundinacea*).

Systematic management of the forests commenced in 1877, but the early administration was not successful. More satisfactory results have been obtained since 1891; and the department is now superintended by a Pārsī Conservator trained at Cooper's Hill, who has under him an assistant, a working-plan officer, 7 rangers, 7 sub-rangers, 202 guards,

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(Rs. 33,400), and bamboos (Rs. 32,100), while the expenditure was Rs. 64,000.

Rich magnetic iron-sand is brought down in large quantities by the Tāpti when in flood, and the alluvium deposited on the bank of the river is full of it. The ore seems to have been worked to some extent formerly, but the introduction of cheap iron from Europe has destroyed the industry. The establishment of smelting works in the Songarh *tāluka* has been considered. Traces of gold have been found in the river-beds.

**Mines and  
minerals.**

Good sandstone is quarried at Songir on the left bank of the Hiran river, in the Sankheda *tāluka*. The work is carried on by a private company, which pays 2 annas for every large and 1 anna for every small hand-mill stone removed from the quarry, and 12 annas for each cartload of building material. Other kinds of stone are common, but are not worked. Granite of a very handsome variety is found at Virpur in the Kadi *prānt*, and at Bhulwan and Bodeli in the Baroda *prānt*. Crystalline limestone of many colours occurs at Motipura, Harikua, and Wadeli, in the same *prānt*. The green marble of Motipura, when cut and polished, has been described, on competent authority, as the most beautiful marble in India. In Amreli there are practically unlimited supplies of common building stone, such as basalt and miliolite, some of the latter being equal in quality to the best stone obtained in the famed Porbandar quarries.

**Arts and  
manufactures.**

As in other parts of Gujarāt, the hand-loom weavers are generally Dheds and Musalmāns, though Khattris, Tais, and Vanjhas also practise the same handicraft. Coarse cotton cloth known as *doti*, *khadi*, or *chophal*, is woven in all parts, the products of the Amreli *prānt* being perhaps the best. They are chiefly disposed of locally, as the erection of steam weaving-mills has almost destroyed the export trade in such material. Efforts are being made to introduce the use of looms of improved patterns. The Khattris of Baroda city turn out a rough woollen cloth which is often used for blankets. In the Kadi *prānt* a large number of Musalmān and Hindu women spin cotton thread, which is afterwards woven by Dheds. A more valuable industry is carried on at Pātan, where weavers manufacture *mashrū*, which is exported to Ahmadābād and other places. Silk is also brought to Pātan from Ahmadābād and Bombay, and there woven into *gajis*, *pītāmbars*, and the highly appreciated *patolas*. The sacred threads worn by Pārsīs are largely made at Navsāri by women of the priestly class, and exported to Bombay.

At Baroda embroidery with gold and silver thread is undertaken by a few artisans, and the work in both pattern and execution is of a superior description. The Kharadis of Pātan also turn out very good embroidery, while more simple work is prepared at Navsāri.

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The export trade of the State consists mainly of agricultural produce, such as cotton, grain, oilseeds, opium, tobacco, and raw sugar, Bombay being the chief market. Brass and copper vessels are exported from Visnagar and Kadi to Ahmadābād and Kāthiāwār, and the silk fabrics of Pātan are in wider demand. The imports consist of rice and other grains, refined sugar, metals, salt, piece-goods, spices, and kerosene oil. Goods are largely carried by rail, but there is some traffic by sea from the ports of Dwārka, Navsāri, and Bilimora. The harbours at the two last are being improved, and the formation of a harbour at Velam is under consideration.

As traders, petty shop-keepers, money-lenders, and bankers, the Baniās occupy a prominent position. Some of them also trade in cloth, but in this respect the Bhavsars (or Chhipas) perhaps excel them. Brass and copper vessels are dealt in by the Kansāras. The Gandhis, who are in general Jains, trade in groceries, spices, articles of common use as drugs, and medicines prepared according to native fashion. The sale of vegetables is almost exclusively appropriated by the Kāchhis, while the Ghānchis are dealers in vegetable oil and kerosene. They also sell milk and *ghī*. The Bohrās have a special trade in iron vessels, such as frying-pans, buckets, &c., and in ropes of various kinds, while the petty Bohrās sell every kind of small article. Confectionery is dealt in by the Kandois, and the Tambolis sell betel-leaves, betel-nuts, and tobacco. Corn is sold by Baniās or Ghānchis. They purchase wholesale from the cultivators and then sell by retail in the markets. For molasses and sugar there are always special shops in large centres, but elsewhere as a general rule they are sold by the Gandhis.

Most of the important towns in Baroda territory are either on the railway, or are connected by fair roads with stations at no very great distance. No railway passes through the Amreli **Communications.** *prānt*, but part of it lies within easy reach of the Bhāvnagar-Gondal-Junāgad-Porbandar Railway. One of the main lines from Bombay to Northern India passes through the State. The southern portion is the broad-gauge Bombay, Baroda, and Central India Railway, which crosses parts of the Navsāri and Baroda *prānts*.

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In connexion with the chief lines of traffic through the country, there are ferry-boats in many places in Baroda territory, some belonging to private owners, others to the State. The Mindhola river is crossed by four ferries, and the Ambikā by three. The Tāpti has eight, the Narbadā thirteen, the Mahī seven, the Vishwāmītri two, the Sābarmatī one, while in Okhāmandal there are ten.

Postal arrangements are entirely under British jurisdiction, the State forming part of the Bombay circle. Telegraph offices have been opened in all the large towns. The following statistics show the postal business in the State for the year 1904-5:—

Number of post offices . . . . .	203
Number of letter-boxes . . . . .	563
Number of miles of postal communication . . . . .	967½
Total number of postal articles delivered:—	
Letters . . . . .	2,222,928
Post-cards . . . . .	5,450,545
Packets (including unregistered newspapers) . . . . .	235,738
Newspapers (registered as such in the Post Office) . . . . .	338,225
Parcels . . . . .	23,021
	Rs.
Value of stamps sold to the public . . . . .	1,33,416
Value of money orders issued . . . . .	16,26,490

When there is scarcity of rain, the liability to famine varies in different parts according to the means of irrigation. Thus the *rānī*

**Famine.** *mahāls* of Navsāri, with a stony and inferior soil,

suffer as there is no possible way of irrigating the land. In the Kāhnam and Chorāsi tracts of Baroda wells can only be made with great difficulty, owing to the prevalence of black soil. Most of the Kadi *prānt* is suitable for the sinking of wells, the exceptions being portions of the Pātan and Sidhpur *tālukas*, the *peta mahāl* of Harij, and the neighbouring parts of the Kadi and Vadāvli *tālukas*, a part of the Kalol *tāluka*, the *peta mahāl* of Atarsumba, and the tract of country through which the Sābarmatī flows. In Amreli the country bordering on the Gir, the southern portion of the Dhāri *tāluka*, and the northern part of the Kodinār *tāluka* have few wells, while on the sandy and almost rainless promontory of Okhāmandal both soil and climate seem to combine to forbid cultivation.

The records of early famines are very scanty. There was certainly a great famine in 1791, and another in 1812-3, which prevailed most

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As the registration of births and deaths has only recently been organized, statistics of the effect on population are not very reliable. During the famine year the number of deaths recorded was 131,261, while the average mortality of the previous five years was only 42,723. The deaths are attributed to the following causes: cholera, 21,986; fever, 73,294; dysentery and diarrhoea, 8,560; other causes, 27,421. According to the famine report for the year 1899-1900, the number of deaths due to famine causes alone, to the end of July, 1900, was 68,674.

The State is in direct political relation with the Government of India, all communications passing through the Administration. Resident.

The administration is carried on by an executive council, subject to the control of the Mahārājā, who is assisted by a Dīwān and other officers. A number of departments have been formed, which are presided over by officials corresponding to those in British India, the principal heads of departments being members of the council. The revenue, financial, and settlement departments are at present controlled by Mr. R. C. Dutt, a retired Indian Civilian. Other departments deal with public works, medical, education, police and jails, judicial, military, records, and palace.

The State is divided into four *prānts*, corresponding to the Districts of British territory, and each *prānt* is subdivided into *mahāls* or *tālukas*, which number thirty-three, besides a few *peta mahāls* or sub-*tālukas*.

A *Sūbah* or Collector is in charge of each *prānt*, with an Assistant called the *naib-sūbah*. A *vahivātdār* or *tahsildār* is in charge of each *tāluka*. Corresponding to the Commissioner in British India is a *Sar-sūbah*, who supervises the work of the *Sūbahs*, and is subordinate to the Revenue Minister. For some years attempts have been made to restore village autonomy, and since 1902 a *panchāyat* has been formally constituted for each village with a population exceeding 1,000, smaller hamlets being grouped together. The number of members varies from five to nine, half being appointed by the district officials and half selected. The *patel* or *headman* is president, and the accountant and schoolmaster are members *ex officio*. These bodies are in charge of various details connected with the administration, and form part of the scheme for local self-government, which is described below.

Before the administration of the present Mahārājā there were few published codes in force, and these dealt chiefly with civil and criminal procedure, stamps, and registration. In 1883 a law committee was constituted, consisting of the

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A special court, for the trial of civil and criminal cases affecting certain privileged persons, such as *sardārs* and *dgrakdārs*, sits at Baroda, and is known as the Sardārs' Court. *87.7*

Minor offences with regard to sanitation, petty quarrels, &c., are disposed of by the village *pāṭels*, who can fine up to Rs. 5, and inflict 48 hours' imprisonment in the village lock-up. *14820*

Cases of theft and robbery are more frequent than any others, and offences against the person rank next, although murders and other cases of grievous hurt are not prevalent. Offences against public tranquillity are comparatively rare. The following table gives statistics of crime and litigation for a series of years :—

#### CRIMINAL AND CIVIL JUSTICE

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1904-5.
<i>Criminal.</i>				
Number of persons tried .	21,404	30,816	22,680	22,295
<i>Civil.</i>				
Suits for money and movable property . . . . .	14,912	20,596	13,450	11,904
Title and other suits . . .	809	1,903	1,341	1,200
Rent suits . . . . .	188	365	736	501
Total	15,909	22,864	15,527	13,605

A Registration department was formed in 1885. In the decade ending 1900 the number of offices was 48, and the average number of documents registered was 15,945. In 1904-5 there were 49 offices, and 20,641 documents were registered.

The department of finance and accounts is usually controlled by an Accountant-General, and is modelled on the system in force in

**Finance.** British India. In addition to the usual detailed examination of accounts at the head office, the officials of the inspection branch tour and examine the working of all disbursing offices, and check cash balances and stock.

The main items of revenue in the Baroda State are land revenue, tribute from other Native States in Gujarāt and Kāthiāwār, opium, excise, stamps, and railways. The main items of expenditure are the palace, civil establishments, army, public works, police, and education.

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**Land revenue.** include whole villages, of which about 8 per cent. have been alienated. A general term applied to such lands is *bhārkkhālī*, the expression meaning those of which the produce is not brought into the State *khāla* or 'grain-yard.' Prominent among the holders of such land are the *Girāsīās*, whose ancestors held estates under the Mughals, or rose to power subsequently. Some *Girāsīās* are entitled to cash payments only, while others hold land and receive allowances as well. Land which is exempted from assessment is called *nakarī*, and includes *dharmādaya*, *devasthān*, and *pīrasthān*, or lands for the support of charitable institutions or to maintain religious establishments. *Chākaryat* lands are those granted in lieu of cash for services rendered to the State, and the occupants have no power to sell, mortgage, or otherwise dispose of them. *Pasaita* lands are free grants to the different orders of village servants in Gujarāt. There are also *ināmī* grants and alienations given as rewards for services, military or civil, and many less important classes of tenure. Since 1880 alienations have been more carefully supervised than was usual in the past.

The principal tenure in the *khālsa* area is *ryotwārī*, under which the State collects the revenue directly from each cultivator without the intervention of a third party. The land revenue is usually assessed in cash on the area of the land occupied, but in a small and backward tract it is still levied on the number of mattocks used. This tract is now confined to one corner of the State and is mostly forest land. The cultivators have full rights of sale and mortgage; but if a holding is sold in execution of a decree, sufficient land is reserved for the subsistence of the cultivator and his family.

Two tenures, which resemble to some extent the *zamīndārī* tenure of Northern India, are called *narvadārī* and *bhāgdārī*. The latter has practically disappeared. In the former a lump assessment is made on a whole village, on general considerations, and the *narvadārs* are left to make their own terms with the actual cultivators. As a rule, they set aside a portion of the village the produce of which meets the State demand. While nominally allowed to alienate their rights, they remain responsible for the full assessment. Under the *ankadabandī* and *ekankadī* tenures a lump sum is assessed on a whole village, and the cultivators are left to distribute the demand among themselves. The assessment is subject to revision in the case of the former, and is permanently fixed in the latter class.

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The manufacture of salt is carried on only in Amreli. The product is sold in this *prānt*, and cannot be exported to other parts of Baroda or to British India. Salt made at Kodinār is a State monopoly; but no restrictions are in force at Okhāmandal, except the levy of an export duty on salt exported to Zanzibar and other foreign ports. In the rest of the State salt may not be manufactured. In 1904-5 the State realized Rs. 573 from export duty, and Rs. 348 from the monopoly, while it spent Rs. 230 on the latter and Rs. 864 on preventive establishment.

The principal sources of excise revenue are the manufacture and sale of country liquors and toddy, *bhang*, *gānja*, and other intoxicating drugs, and fees for licences for the sale of imported foreign liquors. In Amreli the out-still system is in force, under which the rights to manufacture and sell liquor are sold together. In other *prānts* liquor is manufactured at a central distillery, still-head duty being levied at rates varying from 6 annas a gallon for liquor at 60° under proof, to Rs. 2-8 for liquor 15° under proof. Licences for retail vend are sold by auction. Toddy is sold in shops which are let singly or in groups of licensed vendors, and in addition a tree tax is levied. It is important only in Baroda and Navsāri. Licences for the sale of imported liquors are given at fixed annual rates, varying from Rs. 75 to Rs. 125. The excise revenue during the decade ending 1890 averaged 5.44 lakhs, and during the next ten years 8.5 lakhs. In 1901 the revenue was 5.8 lakhs, and in 1904-5, 6.8 lakhs. The chief heads of receipts in the last year were 5.8 lakhs from liquors and Rs. 93,000 from toddy. The incidence of receipts per head of the population was R. 0-1-9 in 1881, R. 0-5-5 in 1891, R. 0-4-8 in 1901, and R. 0-5-6 in 1904-5. The Marāthās, Kolis, and labouring Hindus, the Pārsis, and some of the Muhammadans consume country liquor; but as usual the greatest demand is in the capital and chief centres. In Navsāri there is a large consumption of toddy, because of the numerous palms that grow there, and the superior nature of the manufactured drink. *Bhang*, *gānja*, &c., are not used nearly so freely as liquor. The higher classes are as a rule strongly averse to the use of liquor, though some educated persons take a stimulant in case of illness. The wealthier part of the community, as for instance the Pārsis, prefer imported spirits to the coarser country brands.

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The principal sources of excise revenue are the manufacture and sale of country liquors and toddy, *bhang*, *gānja*, and other intoxicating drugs, and fees for licences for the sale of imported foreign liquors. In Amreli the out-still system is in force, under which the rights to manufacture and sell liquor are sold together. In other *prānts* liquor is manufactured at a central distillery, still-head duty being levied at rates varying from 6 annas a gallon for liquor at 60° under proof, to Rs. 2-8 for liquor 15° under proof. Licences for retail vend are sold by auction. Toddy is sold in shops which are let singly or in groups of licensed vendors, and in addition a tree tax is levied. It is important only in Baroda and Navsāri. Licences for the sale of imported liquors are given at fixed annual rates, varying from Rs. 75 to Rs. 125. The excise revenue during the decade ending 1890 averaged 5.44 lakhs, and during the next ten years 8.5 lakhs. In 1901 the revenue was 5.8 lakhs, and in 1904-5, 6.8 lakhs. The chief heads of receipts in the last year were 5.8 lakhs from liquors and Rs. 93,000 from toddy. The incidence of receipts per head of the population was R. 0-1-9 in 1881, R. 0-5-5 in 1891, R. 0-4-8 in 1901, and R. 0-5-6 in 1904-5. The Marāthās, Kolis, and labouring Hindus, the Pārsis, and some of the Muhammadans consume country liquor; but as usual the greatest demand is in the capital and chief centres. In Navsāri there is a large consumption of toddy, because of the numerous palms that grow there, and the superior nature of the manufactured drink. *Bhang*, *gānja*, &c., are not used nearly so freely as liquor. The higher classes are as a rule strongly averse to the use of liquor, though some educated persons take a stimulant in case of illness. The wealthier part of the community, as for instance the Pārsis, prefer imported spirits to the coarser country brands.

The Stamp department is conducted on methods analogous to those obtaining in British territory. Various kinds of stamps and stamped

In 1877 municipalities were established in all towns containing a population of 10,000 persons and over, excepting Dwārka, and grants were made by the State at the rate of 4 annas per head of population. The grants sufficed only for a limited attention to conservancy, lighting, watering, &c., and were subsequently raised to 8 annas per head for all towns where the population is more than 7,000, and 6 annas per head in other cases. Municipalities were subsequently established in twenty-two other towns with a population of less than 10,000. From 1899-1900 (famine year) the grants were reduced to 4 annas, except in Pātan. In 1905 separate sources of income were assigned to some municipalities. Thus Baroda city received a grant of 1.3 lakhs and the net receipts from octroi, while custom duties, tolls, local cess, and a proportion of the excise revenue raised in them were handed over to seven other towns, the ordinary grant being reduced or abolished. In 1905 there were altogether 35 municipal towns: Baroda city, with a population exceeding 100,000; 10 with more than 10,000 and less than 100,000; and 24 with less than 10,000. The total population within municipal limits was 412,626.

With the exception of Baroda city and seven other towns, the *Sūbah* appoints no less than half the members, who are from eight to sixteen in number, and hold office for three years. In making his nominations the *Sūbah* is expected to take into consideration the different castes of the inhabitants, and the nature of the trade carried on in the town. He can also appoint State servants, such as members of the medical and educational departments. In the more important towns, *naib-sūbahs* help in the administration, and in the *tāluka* towns the *vahivūt-dārs*. In 1905 a scheme was introduced by which half the members are elected in the seven towns referred to above. The principle of election has been introduced to a certain extent in other municipalities also.

The following table shows the expenditure of the municipalities, excluding Baroda city:—

	1889-90.	Average for the ten years 1891-1900.	1900-1.	1904-5.
	Rs.	Rs.	Rs.	Rs.
Establishment . . . . .	Details not avail- able	Details not available	15,687	12,504
Public works . . . . .			10,271	13,224
Planting of trees . . . . .			191	202
Conservancy . . . . .			57,825	48,630
Watering roads . . . . .			3,480	2,377
Lighting . . . . .			13,496	13,582
Fire establishment . . . . .			579	918
Tools and plant . . . . .			776	1,378
Miscellaneous . . . . .			1,226	4,736
Total	70,812	1,23,194	1,03,531	97,551

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lakhs was spent on the regulars, 6.5 lakhs on the irregulars, and the balance on pensions. In addition, the State pays 3.7 lakhs annually to the British Government as commutation for the maintenance of the former Baroda Contingent, making a total military expenditure of 21.6 lakhs. A regiment of native infantry of the Indian Army garrisons Baroda, which is a cantonment in the Mhow division of the Western Command.

Before 1860 the police administration was in the hands of the revenue farmers, who were permitted to exercise magisterial and police functions. The system was unsatisfactory, and consequently numerous changes and improvements were made; but the first thorough reform was introduced by Sir T. Mādhava Rao, who separated the work of the magistrates from that of the police.

#### Police and jails.

The present organization of the regular police is as follows: At the head of the department is a Commissioner. Each *prānt* is under a district police officer, who is called police *naib-sūbah*, corresponding in rank with the District Superintendent, and has under him a varying number of inspectors. The inspectors are in charge of subdivisions, which consist of three or more *tālukas*. Each *tāluka* has a *faujdār* (chief constable). A *tāluka* is subdivided into *thānas* (outposts), each *thāna* containing a certain number of villages. Large and important *thānas* have *chaukīs* under them for a small group of villages. The *thānas* are under *naib-faujdārs*, and the *chaukīs* under *havildārs* or *jemadārs*. The sanctioned strength of the regular force in 1904-5 was 4,886, made up as follows: 60 officers, 4,622 subordinate officers and men, and 204 mounted police, besides 129 non-effectives. The actual strength was 4,660, and the total cost was 6.4 lakhs. The sanctioned strength allows one man of the regular police to every 2.9 square miles of country, and to every 690 inhabitants. The rural police are said to number about 10,000 men. These latter are, strictly speaking, subordinate to the village *pañchāyats*, but in criminal cases must give assistance and report to the regular police.

The system of recruitment of the regular police is almost the same as in British territory. Recruits must be men of good character, with a height not less than 5 feet 5 inches, and circumference of chest not less than 31 inches. After enlistment each recruit is trained at the head-quarters of the division for at least six months, and is taught drill and the use of the rifle. Those who cannot read and write receive oral instruction in their duties, and manuals are provided containing the chief points of the Police Act and other regulations. In 1904-5 about 63 per cent. of the force could read and write. Educated men have not shown much desire to enter this department; but a change seems to be setting in, and at the present time there are even a few

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In 1871 five State schools were opened, two for Gujarātī, two for Marāthī, and one for English tuition. In 1875 a department of public instruction was established, and rapid extensions and developments then followed until the present system was established. The department, which is controlled by the Vidyādhikāri or Minister of Education, is divided into two branches, the Anglo-vernacular and the vernacular branch. The staff of the Baroda College and high school inspect the former, while the latter is supervised by an Inspector in each *prānt*, aided by eleven deputy-inspectors and a twelfth for Urdū and low-caste schools.

The Baroda College was founded in 1881, and recognized by the University of Bombay in the same year. It is fully equipped with chemical and physical laboratories, a botanical garden, an excellent library, and prepares students for the highest degrees in the faculty of Arts, the B.Sc., and also for the first LL.B. examination of the University. Close to the college building are large boarding-houses for the residence of students. In 1905-6 students from this college passed the following examinations: Previous 35, Intermediate 30, B.A. 19, B.Sc. 3, M.A. 1, and first LL.B. 13. A number of students have been sent at the State expense to continue their studies in England, America, and Japan.

Secondary schools are divided into high schools and Anglo-vernacular schools. Their number has risen from 10 with 809 pupils in 1881 to 17 with 1,978 pupils in 1891, 21 with 2,926 pupils in 1901, and 21 with 3,095 pupils in 1904-5. In the last year the State maintained 3 high schools and 14 Anglo-vernacular schools, and aided the other institutions. The total expenditure was 1.5 lakhs, and the receipts from fees were Rs. 32,000. The proportion of the male population of school-going age under secondary instruction in 1904-5 was 1.83 per cent.

In the vernacular schools education is imparted in Gujarātī, Marāthī, or Urdū, and in the best of the Marāthī and Gujarātī schools there are seven standards, with Sanskrit as an optional subject. These schools are provided in all towns and villages with a population exceeding 1,000, though even smaller places possess them. Great attention is paid in primary schools to subjects of practical use, such as letter-writing, book-keeping, history and geography of the State, hygiene, village accounts, &c. Moral instruction is also given, and physical education is imparted. In some schools manual training has also been

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Since 1886 schools where music is taught on scientific principles have been maintained in Baroda and other places. These are exceedingly popular, and contained 638 pupils in 1904-5. Music is also taught to girls in the training college and in the higher classes of the vernacular girls' schools.

In 1881 there were only 13 Muhammadan students in secondary schools, while primary schools contained 1,456. In 1891 there was one Muhammadan in the Baroda College, besides 32 in secondary and 5,123 in primary schools. In 1901 the number of Muhammadan pupils in the college was 3, in the secondary schools 69, and in the primary schools 7,639. A further rise took place in 1904-5, when 9,418 boys and 447 girls were attending schools. Muhammadan education has thus made rapid strides, though the number of those who desire higher instruction is small. Special Urdū schools, numbering 39, have greatly helped the community. The Mahārājā has recently founded handsome scholarships to assist Muhammadans in pursuing a university career.

Special schools are maintained for the jungle tribes and for the castes regarded as unclean. The former are taught reading and writing, and are also trained in carpentry and agriculture at Songarh. Less success has been obtained with the unclean castes, but in 1904-5 the number of pupils was 1,715, or 10 per cent. of the children of a school-going age, including 68 girls. Education in these schools is entirely free.

The total State expenditure on education amounted to 4.9 lakhs in 1891, to 8.2 lakhs in 1901, and to 6.7 lakhs in 1904-5, or about  $5\frac{1}{2}$  annas per head of the population. A number of scholarships are also granted from the Mahārājā's privy purse at institutions in Bombay and Poona.

The Census of 1901 showed that out of every 1,000 of the population 87.7 could read and write, the proportion rising to 162.7 in the case of males, and being 7.6 for females. Among Pārsīs 60 per cent. were literate, and among Jains 36 per cent., while ~~Muslimans~~ (9.4 per cent.) were rather more advanced than Hindus (8.5 per cent.). The Animists are the most backward community, with only 3.6 per cent.

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The Sanitary Commissioner supervises sanitary arrangements in villages, and his instructions and regulations are enforced by the local revenue officers and the police *pātel*s. These officers have the power of fining persons who by storing manure or in any other way cause nuisances dangerous to health. In 1905 duties connected with village sanitation were entrusted to the local boards.

The system of measurement followed in the State is an improved combination of chain and cross-staff survey. Villages mapped by the

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## STATISTICS OF EDUCATION, BARODA STATE

	1891.				1901.				1904-5.			
	Number of institutions.	Scholars.			Number of institutions.	Scholars.			Number of institutions.	Scholars.		
		Males.	Females.	Total.		Males.	Females.	Total.		Males.	Females.	Total.
<i>Public.</i>												
Arts college . . .	1	113	...	113	1	216	...	216	1	225	...	225
High schools . . .	2	697	...	697	3	886	...	886	3	1,126	...	1,126
Anglo-vernacular schools	11	908	...	908	14	1,401	...	1,401	14	1,486	...	1,486
Primary schools . . .	374	38,988	4,467	43,455	1,119	62,509	14,437	76,936	1,163	63,013	12,235	75,248
Training schools . . .	2	74	19	93	1	...	25	25	2	66	26	92
Special schools . . .	4	497	...	497	9	817	...	817	8	974	...	974
<i>Private</i> (with grant-in-aid).												
Advanced . . .	4	373	...	373	4	639	...	639	4	483	...	483
Elementary . . .	121	7,393	...	7,393	61	5,524	...	5,524	66	4,985	185	5,170
Orphanages . . .	...	...	...	...	...	...	...	...	5	94	71	165
Total	519	48,953	4,486	53,439	1,212	71,992	14,452	86,444	1,266	72,452	12,517	84,969

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Orphanages . . . . .	...	...	...	...	...	...	...	...	5	94	71	165
Total	519	48,953	4,486	53,439	1,212	71,992	14,452	86,444	1,266	72,452	12,517	84,969

*jowār*, wheat, *math*, gram, *adad*, *tuver*, *val*, *chola*, *tal*, *diveli*, cotton, sugar-cane, *kasumbo*, and tobacco. Many other minor crops and vegetable products are raised for local consumption.

Tāluka.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Baroda (city excluded) . . .	160	...	110	60,428	332	— 37.4	6,375
Pādra . . .	196	1	82	73,395	374	— 20.5	6,727
Petlād . . .	181	7	68	134,558	743	— 14.1	17,001
Sāvli . . .	188	1	75	38,340	204	— 14.6	3,250
Sisva . . .	83	1	30	43,461	524	— 19.4	4,232
Chorānda . . .	284	...	99	48,758	208	— 22.2	5,128
Vaghodia . . .	143	...	71	20,804	145	— 23.9	1,087
Dabhoi . . .	190	1	102	49,077	258	— 17.8	6,319
Sinor . . .	139	1	45	29,979	216	— 23.3	4,339
Sankheda . . .	280	2	190	36,665	159	— 35.7	3,972
Tilakwāda . . .	34	1	32	4,816	141	— 48.2	304
Total	1,878	15	904	540,281	288	— 22.9	57,834
Baroda city with cantonment . . .	9	2	...	103,790	11,532	— 12.2	21,678

The weaving of coarse cotton cloth is the chief industry. But in addition may be mentioned the manufacture of fine turbans at Dabhoi, of cloths at Sojitrā, Petlād, and Bakrol, of embroidery with gold and silver thread at Baroda, and of gold and silver ornaments in most towns. Iron-work is poor, but good locks are made at Petlād, Sojitrā, and Vāso. Excellent brass and copper pots are manufactured everywhere. The only cotton-mill is at Baroda, but there are twenty-six ginning factories. A dyeing factory has been working at Petlād for some years. The chief centres of trade are Baroda, Dabhoi, Chāndod, and Petlād, which are connected by rail. The *prānt* is well provided with communications, as the main line of the Bombay, Baroda, and Central India Railway runs from north to south, with a State branch from Anand to Petlād and Cambay, and narrow-gauge lines connect Dabhoi with Bodeli, Chāndod, Sinor, and Mobha. In addition, the Baroda-Godhra chord line on the broad gauge crosses the *prānt*. The chief roads are those from Baroda to Pādra, Makarpura, Ajwa, and Sāvli, from Petlād to Sojitrā, and from Chāndod to Sinor.

The land revenue decreased from 37.9 lakhs in 1881 to 36.8 in 1891, but rose to 39.8 lakhs in 1901. In 1904-5 the demand was 30.7 lakhs, but owing to famine only 23.8 lakhs was collected. The average assessment per *bigha* ( $\frac{4}{7}$  acre) varies from about R. 0-3-9 in Pādra to Rs. 4 in Sinor. The *prānt* was settled for fifteen years between 1888 and 1893, and a revision is now in progress.

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separated by the Vishwāmitri. Its area is about 2 square miles, and its population (1901) 3,162. The garrison consists of a regiment of native infantry belonging to the Indian army. In or near the cantonment are the church consecrated by Bishop Heber in 1825, the Residency (just outside the boundary line), a stone column raised to the memory of Mr. Williams a former Resident, the American Methodist Episcopal Church and orphanages (280 boys, 260 girls), vernacular schools for boys and girls, and a school for European children maintained by the Government of India and the Baroda State jointly.

**Baroda Town.**—Town in the Sheopur district of Gwalior State, Central India, situated in  $25^{\circ} 29' N.$  and  $76^{\circ} 42' E.$  Population (1901), 6,381. Baroda is now the chief town of the Sheopur-Baroda *jāgīr*, subordinate to Gwalior. The holders are Gaur Rājputs from Bengal. In the twelfth century Bachh Rāj established himself at Ajmer, whence the family were driven by the Muhammadans about two hundred years later. For services rendered to the Delhi emperors certain lands were granted to them, including the territory lying between the Pārbati and Kuntī rivers; and Sheopur, 12 miles north of Baroda, became their head-quarters. During the Marāthā inroads of the eighteenth century the Rājā was forced to acknowledge the suzerainty of Sindhia. Subsequently Daulat Rao Sindhia assigned the lands then held by Rājā Rādhika Dās of Sheopur to his general Jean Baptiste Filose, who compelled the Rājā to relinquish them. Rādhika Dās was, however, permitted to retain a portion of his former territory, including twenty-three villages, and to take up his residence at Baroda. In 1813 twelve additional villages were assigned to him. In 1857 the Rājā revolted and his estates were confiscated, but were restored in 1859, through the mediation of the Resident at Gwalior. The present holder is Rājā Bijai Singh, who succeeded in 1865.

**Baroda.**—Village in the Gohāna *tahsīl* of Rohtak District, Punjab. See BARAUDA.

**Barot.**—Town in the Bāghpat *tahsīl* of Meerut District, United Provinces. See BARAUT.

**Barpetā Subdivision.**—Subdivision of Kāmrup District, Eastern Bengal and Assam, lying between  $26^{\circ} 5' N.$  and  $26^{\circ} 49' N.$  and  $90^{\circ} 39' E.$  and  $91^{\circ} 17' E.$ , on the north bank of the Brahmaputra, with an area of 1,274 square miles. In 1901 the population was 115,935, compared with 135,705 in 1891. It contains one town, BARPETĀ (population, 8,747), the head-quarters, and 600 villages. The land revenue and local rates amounted in 1903-4 to Rs. 2,54,000. The subdivision is sparsely peopled, and there are only 91 persons per square mile, as compared with 153 in the District as a whole. The decrease of nearly 15 per cent. in the last intercensal period was due to exceptional unhealthiness and to the damage done by the earthquake of 1897. The

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**Barrackpore Town.**—Head-quarters of the subdivision of the same name in the District of the Twenty-four Parganas, Bengal, situated in  $22^{\circ} 46'$  N. and  $88^{\circ} 21'$  E., on the east bank of the Hooghly river, 15 miles above Calcutta. The town is comprised within two municipalities: North and South Barrackpore, containing, in 1901, 12,600 and 19,307 inhabitants respectively. South Barrackpore includes Barrackpore cantonment, with a population in 1901 of 9,888. The name is probably derived from the fact of troops having been stationed here since 1772; the natives call the place Chānak. To the south of the cantonment is Barrackpore Park, which has been laid out with much taste; it contains the suburban residence of the Viceroy of India, built by Lord Minto and enlarged by the Marquis of Hastings. The military force stationed at Barrackpore consists of a field battery, a company of British infantry, and a native infantry regiment.

Barrackpore has played a part in two mutinies. In 1824, when Bengal troops were required to take part in the Burmese War, the 47th Bengal Infantry, which was stationed here, was warned for foreign service. Alarmed by rumours that they were to be transported to Rangoon by sea, the regiment mutinied on parade on October 30. After ineffectual attempts at conciliation, the regiment was paraded on November 1 in presence of Sir Edward Paget, the Commander-in-Chief, who directed them either to obey the orders to march or to ground their arms. Upon their refusal, a battery of European artillery, supported by two British regiments, opened fire upon the mutineers, who broke at once and made for the river, throwing away their arms. Some were shot, some drowned, and others hanged; and the number of the regiment was removed from the Army List.

The first sparks of the Mutiny of 1857 were kindled in Barrackpore. The excitement which had been rapidly spreading among the native troops culminated on March 29, when Mangal Pānde, a sepoy of the 34th Native Infantry, attempted to kill one of the officers, Lieutenant

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**Bārsi Tāluka.**—*Tāluka* of Sholāpur District, Bombay, lying between  $17^{\circ} 57'$  and  $18^{\circ} 26'$  N. and  $75^{\circ} 36'$  and  $76^{\circ} 7'$  E., surrounded on all sides by the Nizām's Dominions, with an area of 596 square miles. There are two towns, BĀRSI (population, 24,242), the head-quarters, and VAIRĀG (5,163); and 122 villages. The population in 1901 was 139,435, compared with 140,322 in 1891. With the exception of the Sholāpur *tāluka*, Bārsi is the most thickly populated in the District, with a density of 234 persons per square mile. The demand for land revenue in 1903-4 was 2 lakhs, and for cesses Rs. 14,000. The *tāluka* is crossed by several streams, and is, on the whole, well wooded. The villages are small, and lie chiefly on river banks. Bārsi has a better climate and a more plentiful and regular rainfall than the rest of Sholāpur.

**Bārsi Town.**—Head-quarters of the *tāluka* of the same name in Sholāpur District, Bombay, situated in  $18^{\circ} 14'$  N. and  $75^{\circ} 41'$  E. Population (1901), 24,242, including Hindus, 20,881; Musalmāns, 2,785; and Jains, 515. Bārsi is an important centre of trade, with a large export of cotton, linseed and other oilseeds, chiefly to Bombay. There are seven cotton presses, employing about 500 persons. The town is connected with Bārsi Road station on the Great Indian Peninsula Railway by the Bārsi Light Railway, opened in 1897. It possesses a fine temple of Bhagwān, richly ornamented. The municipality, constituted in 1865, had an average income during the decade ending 1901 of Rs. 36,000. In 1903-4 the income was Rs. 51,000. Bārsi contains a Subordinate Judge's court, eight schools, including one for girls, attended by 411 and 52 pupils respectively, and two dispensaries, one of which belongs to the railway company. The water-supply is obtained from a reservoir built in 1877 at a cost of Rs. 28,000. The reservoir, which covers an area of 65 acres near the town, is designed to contain 19,000,000 cubic feet of water.

**Bārsi Tākli.**—Town in the District and *tāluka* of Akola, Berār, situated in  $20^{\circ} 35'$  N. and  $77^{\circ} 7'$  E. Population (1901), 6,288. At this place there is a remarkably fine Hemādpanti temple, with an inscription giving the date Saka 1098 (A.D. 1176), which is probably the date of its construction.

**Bārsoi.**—Village in the head-quarters subdivision of Purnea District, Bengal, situated in  $25^{\circ} 38'$  N. and  $87^{\circ} 53'$  E., on the east bank of the Mahānandā. Population (1901), 3,101. It is a railway junction on the Eastern Bengal State Railway, from which a branch runs to

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**Bārsi Tāluka.**—*Tāluka* of Sholāpur District, Bombay, lying between  $17^{\circ} 57'$  and  $18^{\circ} 26'$  N. and  $75^{\circ} 36'$  and  $76^{\circ} 7'$  E., surrounded on all sides by the Nizām's Dominions, with an area of 596 square miles. There are two towns, BĀRSI (population, 24,242), the head-quarters, and VAIRĀG (5,163); and 122 villages. The population in 1901 was 139,435, compared with 140,322 in 1891. With the exception of the Sholāpur *tāluka*, Bārsi is the most thickly populated in the District, with a density of 234 persons per square mile. The demand for land revenue in 1903-4 was 2 lakhs, and for cesses Rs. 14,000. The *tāluka* is crossed by several streams, and is, on the whole, well wooded. The villages are small, and lie chiefly on river banks. Bārsi has a better climate and a more plentiful and regular rainfall than the rest of Sholāpur.

**Bārsi Town.**—Head-quarters of the *tāluka* of the same name in Sholāpur District, Bombay, situated in  $18^{\circ} 14'$  N. and  $75^{\circ} 41'$  E. Population (1901), 24,242, including Hindus, 20,881; Musalmāns, 2,785; and Jains, 515. Bārsi is an important centre of trade, with a large export of cotton, linseed and other oilseeds, chiefly to Bombay. There are seven cotton presses, employing about 500 persons. The town is connected with Bārsi Road station on the Great Indian Peninsula Railway by the Bārsi Light Railway, opened in 1897. It possesses a fine temple of Bhagwān, richly ornamented. The municipality, constituted in 1865, had an average income during the decade ending 1901 of Rs. 36,000. In 1903-4 the income was Rs. 51,000. Bārsi contains a Subordinate Judge's court, eight schools, including one for girls, attended by 411 and 52 pupils respectively, and two dispensaries, one of which belongs to the railway company. The water-supply is obtained from a reservoir built in 1877 at a cost of Rs. 28,000. The reservoir, which covers an area of 65 acres near the town, is designed to contain 19,000,000 cubic feet of water.

**Bārsi Tākli.**—Town in the District and *tāluka* of Akola, Berār, situated in  $20^{\circ} 35'$  N. and  $77^{\circ} 7'$  E. Population (1901), 6,288. At this place there is a remarkably fine Hemādpanti temple, with an inscription giving the date Saka 1098 (A.D. 1176), which is probably the date of its construction.

**Bārsoi.**—Village in the head-quarters subdivision of Purnea District, Bengal, situated in  $25^{\circ} 38'$  N. and  $87^{\circ} 53'$  E., on the east bank of the Mahānandā. Population (1901), 3,101. It is a railway junction on the Eastern Bengal State Railway, from which a branch runs to

## BARWĀHA

occupies a picturesque site on the bank of the Choral, a tributary of the Narbadā. Population (1901), 6,094. Barwāha, which is said to have been originally called Babulikhhera, was founded in 1678 by Rānā Sūraj Mal, an ancestor of the present *zamīndārs*. It is a place of some importance, and was always a favourite resort with Sivaji Rao Holkar, who built a fine palace on the ridge overlooking the Choral valley. An old fort, now used for the district offices, and an old temple to Jayanti Māta stand near the town. A municipal committee has been formed, which has an income of Rs. 1,300 a year, chiefly derived from octroi and other taxes. The town contains a British and a State post office, a school, a dispensary, a *sarai*, and a Public Works inspection bungalow.

**Barwānī State.**—A guaranteed chiefship in Central India, under the Bhopāwar Agency, lying between  $21^{\circ} 36'$  and  $22^{\circ} 7' N.$  and  $74^{\circ} 28'$  and  $75^{\circ} 16' E.$ , along the left bank of the Narbadā river, with an area of 1,178 square miles. It is bounded on the north by the Dhār State; on the north-west by Alī-Rājpur; on the east by a portion of the Indore State; and on the south and west by the Khāndesh District of Bombay. The State lies generally in the hilly tracts division of Central India, but falls internally into two subdivisions: that of the Narbadā valley district, formed of a fertile alluvial plain; and the remainder of the State, which is rough and hilly. Much of the country is very picturesque, with a succession of ranges and valleys covered with thick forest. In these valleys many traces of former prosperity are met with, such as ruined forts, mosques, and dwelling-houses, now overgrown with jungle, but once used by the Mughal nobles and officials of the Bijāgarh *sarkār* of the *Sūbah* of Mālwa. The climate is subject to greater extremes of heat than Mālwa, while the cold season is of short duration. The annual rainfall, as recorded at Barwānī, averages 22 inches.

The chiefs of Barwānī are Sesodia Rājputs, connected with the house of Udaipur. Tradition traces their descent from the second son of Bāpā Rāwal, the founder of that house, one of whose descendants migrated in the eleventh or fourteenth century into the Narbadā districts, and fixed his residence at Avāsgarh, a hill fort about 8 miles from Jalgun. The history of the line is for the most part lost in obscurity. According to the State records there have been in all fifty-one Rānās; but little is known of them, and it is difficult to determine the time at which many of them lived. Paras Rām (Parsān) Singh, the thirty-fifth chief, was defeated by the Muhammadans, and taken a prisoner to Delhi, where he embraced Islām on the condition that he should be allowed to retain his ancestral estates. His successor Bhīm Singh and the two Rānās who followed, though nominally Hindus, were virtually Muhammadans. About 1650 Chandra Singh, forty-first of the line, finding that Avāsgarh was too weak a position, moved the capital to Barwānī;

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demandd from them per 'plough' (15 acres) of land, where other cultivators pay Rs. 20.

The distance of the State from all railways has delayed the development of trade, although much has been done of late years to increase facility of communication by the construction of feeder-roads in connexion with the Agra-Bombay trunk road, the principal route for traffic. In 1891 there were only 7 miles of metalled roads in the State. There are now 118 miles, providing feeders to the Agra-Bombay trunk road. The road from Barwānī town to Julwānia is the general route for goods and passengers passing to the railway at Mhow, the nearest station, which is 80 miles distant from Barwānī. Four British post offices are maintained—at Barwānī, Anjar, Rājpur, and Khetia—and State offices at other places, with a telegraph office at Barwānī.

The State is divided into four *parganas*, each in charge of a *kamāsdār*, with head-quarters at Anjad, Pānsemal, Silāwad, and Rājpur. The chief, when exercising powers, has complete civil and revenue control, but in criminal matters submits all cases punishable under the Indian Penal Code with seven years' imprisonment or over for trial by the Political Agent, while sentences by the chief of two years' imprisonment or over have to be confirmed by that officer. All appeals from subordinate courts lie to the chief. The British codes, modified to suit local usage, have been adopted in the courts. The State being at present under British administration owing to the minority of the Rānā, the general control lies with the Political officer. The medical and forest departments are in charge of the Agency Surgeon and Forest officer, respectively.

The total revenue is 4.5 lakhs, of which 1.9 lakhs is derived from land, Rs. 28,000 from forests, Rs. 30,000 from customs, and Rs. 29,000 from excise. The land revenue demand amounts to 15 annas per cultivated acre, and 4 annas per acre of total area. The chief heads of expenditure are general administration (Rs. 56,000), chief's establishment (Rs. 53,000), and public works (Rs. 1,10,000). The State pays no tribute to any Darbār and receives no allowances, but it contributes Rs. 3,389 yearly towards the up-keep of the Mālwa Bhil Corps. The British rupee has been legal tender since 1892. The sale of *gānja*, *bhang*, and opium is controlled by the State. In the hills an excise rate of Rs. 2-8-0 is levied from each Bhil village through the headmen, the Bhils being then allowed to prepare their own liquor. A Central jail is maintained at Barwānī, and a regular civil police force has been established. The first school in the State was opened in 1863. In 1898 the Victoria High School was affiliated to the Calcutta University. There are now 19 schools with 1,000 pupils. In 1901, 3 per cent. of the population (almost entirely males) could read and write. Six dispensaries have been opened in the State.

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**Basārḥ.**—Village in the Hājipur subdivision of Muzaffarpur District, Bengal, situated in  $25^{\circ} 59' N.$  and  $85^{\circ} 8' E.$  Population (1901), 3,527. Basārḥ is identified with the capital of the ancient kingdom of Vaisālī. In the sixth century B.C. a confederacy of the Lichchavis was predominant here, and was able to prevent the kingdom of Magadha from expanding on the north bank of the Ganges. Vaisālī was a great stronghold of Buddhism, and Gautama visited it three times during his life. Here was held the second Buddhist council which had so great an effect in splitting up the Buddhists into the Northern and Southern sects. The town was visited by Fa Hian and Hiuen Tsiang; the latter found it in ruins. The principal antiquarian feature of the place is a large brick-covered mound, measuring 1,580 feet by 750 and representing the remains of a vast fort or palace. In the neighbourhood is a huge stone pillar surmounted with the figure of a lion. This monolith, though locally known as Bhīm Singh's *lāth*, appears clearly to be one of the pillars erected by Asoka to mark the stages of the journey to Nepāl which he undertook in order to visit some of the holy sites of Buddhism. It bears no inscription, but can be identified with one of the Asoka pillars mentioned by Hiuen Tsiang at the site of ancient Vaisālī.

[*Archaeological Survey Reports*, vol. xvi, pp. 89-93; and *Reports of the Archaeological Surveyor, Bengal Circle*, for 1901-2 and 1903-4.]

**Basavāpatna.**—Deserted town in the Channagiri *tāluk* of Shimoga District, Mysore, situated in  $14^{\circ} 12' N.$  and  $75^{\circ} 49' E.$ , 16 miles from Channagiri town. It lies in a narrow valley enclosed by hills, and was the original seat of the chiefs who, when Basavāpatna was taken by the Bijāpur army in the invasion of 1637, retired to Tarikere, and are commonly identified with the former place. It was the seat of government for this part of the country under Bijāpur rule, and under the Mughals afterwards. Later it changed hands several times, and was held by the Marāthās for seven years. Haidar Alī dismantled the fort in 1763, and the Marāthās under Parasurām Bhao sacked the town in 1791. The fort was repaired in 1799, but the place never recovered its former prosperity. Near the fort was a mosque where Bābā Budan lived before he settled on the mountain called after him.

**Bashahr.**—One of the Simla Hill States, Punjab, lying between  $31^{\circ} 6'$  and  $32^{\circ} 5' N.$  and  $77^{\circ} 32'$  and  $79^{\circ} 4' E.$ , with an area of 3,820 square miles. Population (1901), 80,582. Number of villages, 70. Between 1803 and 1815 Bashahr was held in subjection by the conquering Gurkhas. On the overthrow of the Gurkha power in 1815, the British Government confirmed the Rājā of Bashahr, by a *sanaʿ*, in possession of all his territories, subject to the payment of a tribute of Rs. 22,500. In 1847 the tribute was reduced to Rs. 5,910, as compensation for the abolition of transit duties. The present Rājā, Sham-

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The principal river is the Pengangā, which, except in one corner of the Bāsim *tālūk*, forms the boundary between the District and the Nizām's Dominions. Entering the District near Wākad on the west, it flows in a south-easterly direction as far as the south-eastern corner of the Pusad *tālūk*. It then takes a sharp turn and flows in a north-westerly direction, resuming its original course, after another sudden bend, close to Māhūr in the Nizām's Dominions. The Pūs is the principal affluent of the Pengangā in the District. It rises near Bāsim town and flows in a south-easterly direction through the Pusad *tālūk*, joining the Pengangā at Sangam, after a course of 64 miles. The Kāta Pūrna runs from its source nearly due north until it reaches the slopes of the Bālāghāt, where it inclines eastward, entering Akola District near Mahān. Other insignificant streams are the Arān, Kūch, Adol, and Chandrabhāga, all tributaries of the Pengangā.

The whole District, like the greater part of the Bālāghāt, is covered with flows of Deccan trap, which were erupted at about the end of the Cretaceous times, the volcanic activity lasting, probably, till the beginning of the Tertiary period. The trap is covered, on the Bāsim plateau and also in the valleys, with black loam. Iron ore is found in the high lands, but probably not in workable quantities.

The commonest trees in cultivated lands are the *babūl*, the *pīpal*, the mango, the tamarind, and the *mahuā*. Forests will be noticed separately. The weed vegetation is that chiefly characteristic of the Deccan, including many small *Compositae* and *Leguminosae*.

Tigers, leopards, bears, wild hog, antelope, *nīlgai*, spotted deer, and *chinkāra* are fairly common; and the wild dog (*Cyon dakhunensis*), the jackal, the wolf, and the hunting leopard (*Cynaelurus jubatus*) are also found in the District.

The hot season is less severe than in the Pāyānghāt. The highest and lowest readings of the thermometer in May, July, and December, 1901, a normal year, were 114° and 84°, 86° and 76°, and 77° and 68°. The climate is fairly uniform, but slightly higher temperatures are experienced in the river valleys. The hot season is intensely dry, and therefore healthy; the weather in the rains is usually cool and pleasant, and the cold season is temperate and healthy.

The rainfall, which is uniform throughout the District, exceeds the rainfall in the Pāyānghāt. In 1901, a normal year, nearly 41 inches were registered. The Pengangā sometimes rises, but no serious damage has ever been done by such floods; and the District has been fortunate in escaping serious natural calamities other than famine.

Bāsim never existed as a separate political entity, and its history is chiefly bound up with that of the Province of which it has always formed part. In the days of the Mughal empire Bāsim was the head-quarters of a *sarkār*, or revenue district, which extended on

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The following table gives particulars of area, towns and villages, and population in 1901 :—

Tālūk.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Bāsim . .	1,046	1	324	153,320	147	— 13.5	4,193
Mangrul . .	630	1	202	91,062	144	+ 10.4	1,767
Pusad . .	1,273	1	298	109,028	86	— 21.6	2,816
District total	2,949	3	824	353,410	120	— 11.2	8,776

Bāsim stood fourth among the Districts of Berār as regards the density of its population (120 persons per square mile). More than 92 per cent. of the people are Hindus. The language usually spoken is Marāthī, but the Musalmāns use a corrupt dialect of Urdū, which is generally understood by all.

In Bāsim, as in all other Districts of Berār, the Kunbīs (110,000) are more numerous than any other caste; the Mahārs (50,700) come second, the Musalmāns (22,800) third, and the Banjārās (21,400) fourth, being more numerous than in any other District in the Province, except Wūn. Dhangars number 14,600, Mālīs 12,500, Brāhmans only 7,700, and Telis 7,600. The Hatgars, specially mentioned in the *Ain-i-Akbarī* as an important tribe in the *sarkār* of Bāsim, now number only 577, and are, strangely enough, less numerous here than in any District in Berār, except Amraotī and Ellichpur. The Banjārās in the *sarkār* of Bāsim are mentioned in the *Ain-i-Akbarī* as being under the headship of a woman; and it is known, from the change of surname among the local Naiks, who have their head-quarters at Narsī, in the Parbhani District of the Hyderābād State, that the office has descended at least once in the female line. The figures for castes, given above, clearly indicate the principal occupation of the people. The District is essentially an agricultural one, over 76 per cent. of its population living by the land. The percentage of the industrial population is 11.

There is only one Christian mission, which is supported by the American Episcopal Methodist body, and has its head-quarters at Bāsim. Of 229 Christians enumerated in the District in 1901, 212 were natives.

The Bāsim *tālūk* is a rich table-land, the trap flows being here covered with a layer of black cotton soil of varying but nearly always sufficient depth. This layer is deeper in the valley of the Pengangā than elsewhere, the conditions of this area being not dissimilar from those of the Pāyānghāt. The surface of

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In Bāsim, as in all other Districts of Berār, the Kunbīs (110,000) are more numerous than any other caste; the Mahārs (50,700) come second, the Musalmāns (22,800) third, and the Banjārās (21,400) fourth, being more numerous than in any other District in the Province, except Wūn. Dhangars number 14,600, Mālīs 12,500, Brāhmans only 7,700, and Telis 7,600. The Hatgars, specially mentioned in the *Ain-i-Akbarī* as an important tribe in the *sarkār* of Bāsim, now number only 577, and are, strangely enough, less numerous here than in any District in Berār, except Amraotī and Ellichpur. The Banjārās in the *sarkār* of Bāsim are mentioned in the *Ain-i-Akbarī* as being under the headship of a woman; and it is known, from the change of surname among the local Naiks, who have their head-quarters at Narsī, in the Parbhani District of the Hyderābād State, that the office has descended at least once in the female line. The figures for castes, given above, clearly indicate the principal occupation of the people. The District is essentially an agricultural one, over 76 per cent. of its population living by the land. The percentage of the industrial population is 11.

There is only one Christian mission, which is supported by the American Episcopal Methodist body, and has its head-quarters at Bāsim. Of 229 Christians enumerated in the District in 1901, 212 were natives.

The Bāsim *tālūk* is a rich table-land, the trap flows being here covered with a layer of black cotton soil of varying but nearly always sufficient depth. This layer is deeper in the valley of Agriculture. the Pengangā than elsewhere, the conditions of this area being not dissimilar from those of the Pāyānghāt. The surface of

modified in the past by an admixture of the types found in the northern tracts of the Hyderābād State, and more lately, since recent years of scarcity and famine, by the importation of cattle of the Nimāri, Sholāpuri, and Labbāni breeds. Buffaloes are chiefly of the Dakhani breed. The local breeds of ponies, sheep, and goats are inferior, and the breeders have neither the knowledge nor the means necessary to their improvement.

Only 6 square miles of the cultivated land were irrigated in 1903-4, consisting almost entirely of garden crops, watered from wells.

Of the forest land, 266 square miles are reserved for the production of timber and fuel, 19 square miles are *ramna* land, and 436 square miles are grazing land. The forests producing timber

**Forests.** are situated on the northern slopes of the Bālāghāt, in the Bāsim *tāluk*, on the hills north of the Pūs river between the Mangrūl and Pusad *tāluk*s, on the hills forming the watershed between the Pūs and Pengangā rivers, and in the south-eastern corner of the Pusad *tāluk* in the loop of the Pengangā. All these forests contain teak, which varies in size and quality in different localities, the best being found in the Kinwat Reserve in the loop of the Pengangā. *Tiwas* (*Ougeinia dalbergioides*) is also common in this Reserve, but rarer elsewhere. *Ain* (*Terminalia tomentosa*), *dhaura* (*Anogeissus latifolia*), *lendia* (*Lagerstroemia parviflora*), and *dhāman* (*Grewia tiliaefolia*) are also common and useful trees. The following trees are common in both forest and cultivated land: *babūl* (*Acacia arabica*), *hīwar* (*Acacia leucophloea*), *mahuā* (*Bassia latifolia*), *gular* (*Ficus glomerata*), *chinch* or *imlī* (*Tamarindus indica*), and *ber* (*Zizyphus Jujuba*). The mango is cultivated, but does not grow wild in the forests; bamboos are rare, and, where found, inferior.

The iron ore found in the Pusad hills, which has already been mentioned, seems to be the only mineral product of the District, and it is very doubtful whether it is of economic value.

There are no important manufactures. The principal industry is the preparation of cotton for the market. The District  
**Trade and communications.** contained 16 ginning factories and 2 cotton-presses, all worked by steam.

The chief export is cotton, which is sent by road to Akola and thence by rail to Bombay. Some of the cotton from the south of the Pusad *tāluk* finds its way to the Hyderābād-Godāvari Valley Railway. Oil-seeds and grain and pulse are also exported. The principal imports are grain and pulse, sugar, salt, and oils, which come chiefly from Akola, having been brought thither by rail. Most of the internal trade is effected through the agency of the weekly markets at *pargana* towns. Bāsim has a cotton market. The traders are chiefly Mārwaris and Komatis.

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Akbar's time, it is evident that the present assessment, though absolutely somewhat higher than Akbar's, is relatively very much lighter.

The first regular settlement of the District after the Assignment was made between 1872 and 1875, and is now expiring; but in those tracts where it has already expired the introduction of the new rates, assessed in 1899, has been postponed, owing to the extent to which the District suffered from the famine of 1899-1900. Under the new assessment the maximum rate is Rs. 1-12 per acre, the minimum 7 annas, and the average 12 annas 4 pies. Land irrigated from streams is assessed at a special land and water rate of Rs. 8 per acre, except in the Pusad *tālūk*, where, for the purpose of encouraging irrigation, it is assessed either as 'dry' land or as land irrigated from wells. Land irrigated from wells is assessed at the maximum rate for 'dry' land in the village in which it is situated where the wells have been sunk before the original survey; but land irrigated from wells sunk since that time is treated as 'dry' land. The average increase of the new rates over the old amounts to 32.2 per cent. throughout the District, but in areas in which the increase is greater than 33 per cent. the enhanced rates are to be gradually introduced.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	5,90	6,02	6,23	7,15
Total revenue . .	7,23	8,63	15,68	9,18

Bāsim town is administered by a municipality, and local affairs in the rest of the District were under the District board, with the three *tālūk* boards subordinate to it. The expenditure of the District board in 1903-4 was Rs. 65,000, of which Rs. 25,000 was laid out on public works and Rs. 10,000 on education. The principal sources of income were Provincial rates, assessed taxes, and the Provincial contribution for primary education.

The District had 20 police stations, 4 outposts, and 3 road-posts, and the force under the District Superintendent of police numbered 413 of all ranks. The District jail at Bāsim was the only jail, and contained in 1904 a daily average of 44 inmates.

Bāsim stood fifth among the six Districts of Berār in the literacy of its population, of whom 3.1 per cent. (6.0 males and 0.2 females) were able to read and write in 1901. Education is most advanced in the Bāsim *tālūk*. In 1903-4 the District contained 73 public, 19 aided, and 30 unaided schools with a total of 4,881 pupils, of whom 4,083 were in public schools and 370 were girls. Of the

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**Basīrhāt Subdivision.**—North-eastern subdivision of the District of the Twenty-four Parganas, Bengal, lying between  $21^{\circ} 31'$  and  $22^{\circ} 55'$  N. and  $88^{\circ} 33'$  and  $89^{\circ} 6'$  E., with an area of 1,922 square miles, of which 1,584 are included in the SUNDARBANS. The northern part of the subdivision consists of a fertile alluvial tract; but to the south, where the delta is in a less advanced stage of growth, there is a network of tidal creeks winding through numerous islands and morasses. The population in 1901 was 372,187, compared with 347,138 in 1891, the density being 194 persons per square mile. It contains three towns, BASĪRHĀT (population, 17,001), its head-quarters, BĀDURIĀ (12,921) and TĀKĪ (5,089); and 920 villages.

**Basīrhāt Town.**—Head-quarters of the subdivision of the same name in the District of the Twenty-four Parganas, Bengal, situated in  $22^{\circ} 40'$  N. and  $88^{\circ} 51'$  E., on the right bank of the Jamunā river. Population (1901), 17,001. Basīrhāt was constituted a municipality in 1869. The income and expenditure during the decade ending 1901-2 averaged Rs. 6,000. In 1903-4 the income was Rs. 6,600, mainly from a tax on persons; and the expenditure was Rs. 6,300. Basīrhāt contains the usual public offices; the sub-jail has accommodation for 12 prisoners. Basīrhāt is connected with Bārāsāt, a station on the Eastern Bengal State Railway, by a metalled road 26 miles in length, along which a light railway with eight stations has recently been laid.

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About 10 square miles, or 25 per cent. of the total area, are cultivated, 126 acres being irrigated. The chief exercises the criminal powers of a first-class magistrate, all heinous crimes being dealt with by the Political Agent. The normal revenue of the State is Rs. 19,000, of which Rs. 16,000 is derived from land. The incidence of the land revenue demand is Rs. 2-9-3 per acre of cultivated area. Bāsoda, the chief town, is situated in  $23^{\circ} 51' N.$  and  $77^{\circ} 56' E.$  Population (1901), 1,850. It contains a British post office, a jail, a school, and a dispensary.

**Basrūr** (the Barcelore or Barkalur of early geographers).—Village in the Coondapoor *tāluk* of South Kanara District, Madras, situated in  $13^{\circ} 38' N.$  and  $74^{\circ} 45' E.$ , 4 miles east of Coondapoor. It was once a large walled town with a fort and a temple, and carried on an important trade with Malabar and the Persian Gulf; but its decline set in after the establishment of the Portuguese at Coondapoor in the eighteenth century, and it is now an insignificant place. The ruins of Sir Thomas Munro's courthouse are still pointed out. As Major Munro he was the first Collector of the District. Population (1901), 1,757.

**Bassein District.**—District of the Irrawaddy Division, Lower Burma, lying between  $15^{\circ} 50'$  and  $17^{\circ} 30' N.$  and  $94^{\circ} 11'$  and  $95^{\circ} 28' E.$ , with an area of 4,127 square miles. It forms an irregular wedge-shaped strip of coast land and delta country, narrowing from north to south, in the extreme south-west corner of the Province. It is bounded on the north by Henzada and Sandoway Districts; on the east by Ma-ubin and Myaungmya; and on the south and west by the Bay of Bengal, which curves round its southern and western edges at the elbow formed by Pagoda Point. The District is divided into unequal parts

**Physical aspects.** by the Arakan Yoma, which enters Bassein at its north-western corner, and runs down its western side at no great distance from the sea. The main portion

lies to the east of this range, consisting of a flat alluvial plain, the northern end of which is rich rice land. Farther south, between the Ngawun and Dagā rivers, it is flooded and poor. To the east of the Dagā and southwards towards Bassein town the land is slightly higher and more fertile. To the west of the Ngawun, as far as the bifurcation of the Dagā, the land is flooded and generally uncultivable. Below that point it is higher and of fair quality, while south of the town of Bassein it is typically deltaic, intersected by innumerable tidal creeks, marshy, and covered with mangrove jungle, with some stretches of rice land here and there. In the south the coast-line consists for the most part of a gently shelving sandy beach, backed by swampy forest land; in the west beyond Pagoda Point, where the hills enter the sea abruptly, the coast is rocky and difficult of approach. With the exception of the Arakan Yoma, which here is comparatively low, there is no high land

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Tigers are scarce; but elephants, *sāmbār*, bison, leopards, and bears are fairly common in the western tracts towards the Yoma. The rhinoceros is nearly extinct, being ruthlessly hunted for its blood, which is accounted a valuable curative medium by the Burmans, among whom it sells for its weight in silver. In the less-developed parts the smaller kinds of deer and also wild hog were plentiful, but are being rapidly exterminated with nets. Crocodiles are found in most of the tidal creeks, and there are rich turtle-beds to the south near the coast.

The climate is rather relaxing, though the heat in summer is tempered to some extent by the strong sea-breezes which spring up in the afternoon. The mean of the maximum temperatures in the hotter months is generally about 95°, that of the minimum temperatures about 75°.

The rainfall is heavy, though, owing to the shelter afforded by the Arakan Yoma, it is not to be compared in volume with what the adjoining District of Sandoway receives. The annual average at the District head-quarters for the ten years ending 1904 has been 113 inches, while at the other recording stations it is highest at Ngaputaw in the south (129 inches), and lowest at Kyonpyaw in the north-east (88 inches).

The great cyclone of May 6, 1902, which affected the whole Burma coast, did some damage in the south and west of the District. Part of the central tract is inundated annually, but serious floods are not known.

Little is known of the early history of the District. Its Burmese name is Pathein, though how and when this was corrupted into Bassein is far from clear. In old Talaing histories the thirty-

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Burmese is spoken by 287,300 persons and Karen by 84,100, a figure which indicates that nearly all the Karens use their own vernacular. Though Talaings are numerous, the Talaing language appears to be hardly spoken at all in Bassein, while in the neighbouring District of Myaungmya it is still the speech of one Talaing out of four.

Burmans numbered 271,800 in 1901; Karens, 85,300 (mostly Pwos); Arakanese, 6,300; Talaings, 4,700. There are 1,200 Chinese, only 280 of whom are females. More than half the Musalmāns and nearly two-thirds of the Hindus live in Bassein town. The agricultural population in 1901 was returned at 259,100, or 66 per cent. of the total.

The large Christian population (more numerous than in any District of the Province except Toungoo) is chiefly due to the Karen converts of the American Baptist Mission, of whom 13,890 returned themselves as Baptists in 1901, and who also probably formed a large proportion of the 5,409 Christians who returned no denomination. Roman Catholics and Anglicans (principally natives) number more than 1,200 each. The total of native Christians was 22,000. The American Baptist Mission works among both the Karens and the Burmans. The Roman Catholics have three mission stations in the District.

The conditions of agriculture are generally uniform. The richest land lies to the north and north-east. In the north the soil is composed of

**Agriculture.** a rich silt-impregnated loam, protected from inundation by an extensive system of Government embankments, while in the north-east the land consists of new clearings of rich tree-jungle. The southern portion of the tract north of the Dagā is liable to floods caused by the back-wash from the Ngawun. South of the Dagā the land is slightly higher and consequently of poorer quality, but it falls rapidly south of the town of Bassein. The Ngaputaw township, except for some high ground in the Thongwa circle, is flat and marshy, the soil is thin, and the surface of the land is intersected by tidal creeks. On the west bank of the Ngawun the lower levels are as a rule flooded, owing to the embankment on the east bank of that stream; and the ground gradually rises from the river to the hills, where cultivation is found only in minute patches on the gentler slopes, or in the valleys between the hill ranges. About 37 miles of the Ngawun embankment lie within the limits of the District. This work, with its continuation northward in Henzada, forms a raised embankment 151 miles in length, protecting from inundation about 1,600 square miles of country.

The methods of cultivation exhibit little variety in the different tracts. Ploughing is performed with a rough wooden plough, consisting of a transverse bar from 7 to 8 feet long, with seven, eight, or nine pointed wooden teeth fixed in it. This is drawn in every direction across the field, more or less frequently according to the quality of the soil. The

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poor quality. Beasts imported from Prome and other breeding centres command high prices. Goats are few in number.

The grazing is ample, and no difficulties are encountered in feeding stock. The grazing-grounds are, however, largely devoid of shade, and this fact and the badness of the water-supply in the hot season are the principal causes of disease. The total area of grazing-ground actually reserved is 104,852 acres, and the total number of cattle in 1903-4 was 153,700, showing about three-fourths of an acre per head of stock.

Numerous fresh-water fisheries exist, a full account of which will be found in a report by Major Maxwell, published in 1904. They lie for

the most part in the north-east of the District. The Fisheries, &c. most important fishery is the Inye Lake in the Kyonpyaw township, the lease of which fetches about Rs. 28,000 annually. Of turtles, both the loggerhead and the green variety are plentiful along the southern coast. The most valuable bank is that at Diamond Island, from which Major Maxwell estimates an out-turn of one and three-quarter millions of turtles' eggs annually, valued at more than a quarter of a lakh. The District fishery revenue amounted to 2.9 lakhs in 1903-4.

The forests present two types. The first is found along both slopes of the Yoma, and is evergreen, interspersed with patches of bamboo. On the western slope it has been greatly overworked in the past, and steps are being taken to 'reserve' large portions. This tract contains *pyingado*, *pyinma*, and about thirty other kinds of timber, and provides large quantities of canes and bamboos used in the fisheries all over the delta and for building. The second type of forest is marshy and tidal, and contains various species of mangrove, *kanazo*, and other inferior woods, used mainly for fuel. Owing to unrestrained clearing of forest in the north-east, fuel will probably be scarce before long in that quarter. The area of protected and 'reserved' forests is 208 square miles, and that of unprotected but 'reserved' forests 76 square miles. The forest receipts in 1903-4 amounted to a lakh.

The only minerals are pottery clay, laterite, limestone, and sandstone, and they are of little commercial importance. The requirements of the newly constructed railway have brought about a temporary development of the limestone and sandstone industry; but, this demand satisfied, the further working of these mineral resources is likely to stop. Laterite is worked in a spasmodic fashion to meet the requirements of the Public Works department or the Bassein municipality, and pottery clay is collected by the pot-makers of Sinobo and Kwinlya; but there is no systematic working of minerals.

A little gold and silver work is done in Bassein, but it is ordinarily of poor quality. The best-known hand industries are pot-making and the manufacture of umbrellas. Glazed pottery is made principally at

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little goods traffic, and all the paddy still comes by river to be milled at Bassein.

In the south of the District, where communication is almost entirely by water, the roads are chiefly in the immediate neighbourhood of Bassein town. The total length of metalled roads outside the town is 42 miles,  $15\frac{1}{2}$  of which are kept up from Provincial and  $26\frac{1}{2}$  from District cess or other Local funds. The total length of unmetalled roads is 53 miles, 24 being maintained from Provincial and 29 from Local funds. The principal roads are: the Bassein-Shwemyindin road, the Bassein-Henzada road, and the Bassein-Shanywa road. In the Ngathainggyaung subdivision the main highways are from Ngathainggyaung to Ataung (via Kyonpyaw), from Yegyí to Inma (via Athok), and from Inma to Kyonpyaw. In the north the embankments constructed by Government about thirty years ago to prevent the flooding of low-lying areas afford a convenient means of communication during the rains. The Ngawun and Dagā rivers are navigable practically throughout the District. No sea-going lines of passenger steamers call at the port of Bassein; but the Irrawaddy Flotilla Company runs steamers from Bassein three times a week to Rangoon via Myaungmya, Wakema, and Ma-ubin, and to Kyonpyaw, daily to Myaungmya, and twice a week to Ngathainggyaung, and in the rains onwards to Henzada. The south is served by private launches. The District east of the Yoma contains scarcely a single village of any size which is not supplied with some form of steamer service. Native boats, large and small, ply on all the inland waters, and numerous ferries are maintained.

The District is divided into two subdivisions, with head-quarters at Bassein and Ngathainggyaung. Each subdivision has three townships.

**Administration.** The Bassein subdivision comprises the BASSEIN, THABAUNG, and NGAPUTAW townships; and the Ngathainggyaung subdivision comprises the NGATHAINGGYAUNG, KYONPYAW, and KYAUNGCON townships. Bassein is the head-quarters of the Bassein-Myaungmya Forest division, under a Deputy-Conservator of forests; and the Port Officer, Bassein, is collector of customs.

The District Judge exercises jurisdiction also over Henzada District, and the Bassein Small Cause Court judge is at the same time the judge of the Bassein township court. Two other judges relieve the township officers of the Ngathainggyaung, Kyaunggon, and Kyonpyaw townships of all civil work and have Small Cause Court jurisdiction locally; but in the remaining two townships the township officers are judges in their respective courts.

Criminal justice is administered in the usual way by the executive officers, District, subdivisional, and township. In addition, a special magistrate has recently been appointed to exercise criminal jurisdiction within the limits of the Ngathainggyaung and Bassein sub-

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modifications that have taken place during the interval in the District boundaries, but it may be pointed out that the land revenue raised from an area larger than the present District was 7 $\frac{3}{4}$  lakhs in 1886. The total revenue from all sources was 35.9 lakhs in 1900-1 and 29.3 lakhs in 1903-4.

The District cess fund, administered by the Deputy-Commissioner for the provision of roads, &c., is maintained by a 10 per cent. levy on the land revenue. Its income in 1903-4 was Rs. 1,65,000, and the chief item of expenditure was Rs. 52,000 on public works. BASSEIN and NGATHAINGGYAUNG with Daunggyi are the only municipalities.

South of Cape Negrais, in 15° 42' N. and 94° 17' E., is the Alguada reef, on which a lighthouse was built in 1865. The structure is of granite, stands 144 feet high, and till 1902 exhibited a first-class catadioptric light visible at 20 miles. In 1902 a new light of 97,000 candle-power, visible 18 miles, was substituted for the old one.

The police are under a Superintendent, assisted by three Assistant Superintendents, in charge of the Ngathainggyaung and Bassein subdivisions and the town of Bassein respectively. The force consists of 3 inspectors, 2 chief head constables, 9 head constables, and 369 sergeants and constables, distributed in 20 police stations and outposts. The military police, who belong to the Toungoo battalion, number 199, and are posted as follows: 90 at Bassein, 34 at Ngathainggyaung, and the remainder at outlying township head-quarters.

The Central jail at Bassein has accommodation for 1,271 prisoners, and had an average daily population in 1903 of 730. The principal industry is mat-making, and the mats are taken as fast as they can be turned out for the shipping which visits Bassein. Furniture is also manufactured and is sold locally.

The percentage of literate persons in 1901 was 41 in the case of males and 7.5 in the case of females, or 25 for both sexes together. The number of pupils at school has increased from 8,630 in 1880-1 to 11,019 in 1890-1, and to 11,531 in 1903-4. In the last year the District contained 19 secondary, 218 primary, 6 special, and 230 elementary (private) schools, with 8,908 male and 2,623 female pupils. The principal educational institution is the Bassein municipal high school, in which instruction is given up to the ninth standard. The expenditure on education in 1903-4 amounted to Rs. 68,600, of which municipalities contributed Rs. 16,700, the cess fund Rs. 14,500, and the Government Rs. 10,400, while Rs. 16,300 was collected in fees and Rs. 10,700 in subscriptions.

There are two hospitals, with accommodation for 75 in-patients. In 1903 the number of cases treated was 24,853, including 1,389 in-patients, and 1,135 operations were performed. The income amounted to Rs. 20,300, the two municipalities contributing Rs. 14,500, private

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The town has an area of nearly 12 square miles, the greater part of which is wooded. The principal streets run parallel to the river, with short connecting roads. The most important is the Strand road, following the stream, from which the other main thoroughfares branch off. The total length of roads within municipal limits is  $37\frac{1}{2}$  miles. The Government offices and treasury are on the site of the old Zechaung fort, built after the province of Pegu was annexed. Around the fort lies the civil station. To the east is the Myothit quarter, through which run two main streets to a pagoda-covered plain, where all the local festivals are held. Close by the fort lie the other principal public buildings, post and telegraph offices, the Queen Victoria Memorial Library, the Roman Catholic and Anglican churches, and the extensive premises of the American Baptist Mission. There are public gardens and a Jubilee Memorial Park. The town contains a number of pagodas, among the most sacred being the Shwemoktaw within the limits of the Zechaung fort, the Tagaung, the Payāgyigon, the Mahābawdi, the Shwezigon, and the Wetlu.

Bassein is well served by the Irrawaddy Flotilla Company, the steamers of which run eastwards to Rangoon and Myaungmya, and northwards to Kyonpyaw and Ngathainggyaung, and, during the rains, to Henzada. The new railway gives connexion twice a day with Henzada (82 miles), and once a day with Letpadan and Rangoon (192 miles). The principal industry is rice-milling; eight important mills and some smaller concerns turn out what is known as 'cargo rice' (one-fifth husk). The manufacture of earthenware and timber-sawing are also important local industries.

Bassein is almost exclusively an exporting market. In 1903-4, 152,000 tons of 'cargo rice,' valued at 104 lakhs, left the port, consigned entirely to Europe. Imports from foreign countries are insignificant; those from Indian ports were valued in 1903-4 at Rs. 89,000, comprising gunnies, betel-nuts, and other Indian commodities. A steady river-borne trade is carried on with Rangoon, and commerce with the rest of Burma is likely to be stimulated by the new railway.

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Bassein early attracted the notice of the Portuguese, as the river or strait separating the island from the mainland was a convenient rendezvous for shipping. In 1534 Bassein with the land in its neighbourhood was ceded to them by Bahādur Shāh, king of Gujarāt, and two years later the fort was built. For more than two centuries Bassein remained in the hands of the Portuguese, and during this time it rose to such prosperity that it came to be called the Court of the North, and its nobles were proverbial for their wealth and magnificence. With plentiful supplies of both timber and stone, Bassein was adorned with many noble buildings, including a cathedral, five convents, thirteen churches, and an asylum for orphans. The dwellings of the *Hidalgos*, or aristocracy, who alone were allowed to live within the city walls, are described (1675) as stately buildings, two storeys high, graced with covered balconies and large windows. Towards the end of the seventeenth century Bassein suffered severely from outbreaks of the plague, so deadly that in 1695 one-third of the population was swept away. Notwithstanding the decay of Portuguese power in the seventeenth century, Bassein, as late as 1720, would seem to have retained much of its prosperity. In that year the population was returned at 60,499, and the revenue a few years later (1729) at as much as 4½ lakhs (Xer. 914,125). But the wealth of one city was unable to stay the advance of the Marāthā power. In 1739 Chinnāji Appa, a distinguished Marāthā general, at the head of a powerful army, appeared before Bassein. After a siege of three months, conducted on both sides with the greatest skill and courage, the garrison was forced to capitulate, and the town and district of Bassein passed into the hands of the Peshwā. Under the Marāthās, Bassein became the chief place in their territories between the Bānkot river and Damān; but they did not long keep possession of the city. In 1780, after a siege of twelve days, Bassein was captured by a British army under the command of General Goddard. By the Treaty of Sālbai (1782) it was restored to the Marāthās; and in 1818, on the overthrow of the last of the Peshwās, it was resumed by the English and incorporated with Thāna District. Here was concluded,

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quantity of teak, with which is mixed *bijāsāl* (*Pterocarpus Marsupium*). Towards the north-east the teak rapidly disappears, and is replaced by *sāl* (*Shorea robusta*), which then becomes the principal timber tree, though much of the forest is of the nature of scrub. Frequently the undergrowth is replaced by patches of dense high grass, with scattered trees of *Diospyros* or ebony. The *Caryota urens* and the palmyra palm are found, the latter in the south and the former in the west and north. Cane brakes also occur by the hill streams. Bamboos, of which three species occur, are restricted entirely to the hills. The average annual rainfall exceeds 50 inches, and the climate on the plateau is pleasantly cool, 102° being the highest recorded.

The family of the Rājā is a very ancient one. It is stated to belong to the Rājputs of the Lunar race, and to have come originally from Warangal about the commencement of the fourteenth century, driven thence by the encroachments of the Muhammadan power. The traditional founder of the family, Annam Deo, is said to have established himself in Bastar under the protection of the goddess Danteshwarī, still the tutelary deity of the family and the State, who presented him with a sword which is held in veneration to the present day. The temple of the goddess at Dantewāra, at the confluence of the Sankanī and Dankanī rivers, was formerly the scene of an annual human sacrifice similar to that of the Khonds; and for many years after 1842 a guard was placed over the temple, and the Rājā held personally responsible for its discontinuance. Up to the time of the Marāthās Bastar occupied an almost independent position, but a tribute was imposed on it by the Nāgpur government in the eighteenth century. At this period the constant feuds between Bastar and the neighbouring State of Jeypore in Madras kept the country for many years in a state of anarchy. The chief object of contention was the Kotapad tract, which had originally belonged to Bastar, but had been ceded in return for assistance given by Jeypore to one of the Bastar chiefs during some family dissensions. The Central Provinces Administration finally made this over to Jeypore in 1863, on condition of payment of tribute of Rs. 3,000, two-thirds of which sum was remitted from the amount payable by Bastar. By virtue of this arrangement the tribute of Bastar was, until recently, reduced to a nominal amount. The late Rājā, Bhairon Deo, died in 1891 at the age of 52. In consequence of the continued misgovernment under which the State had suffered for some years, an officer selected by the Local Administration had been appointed as Diwān in 1886. The late Rājā's infant son, Rudra Pratāp Deo, was recognized as his successor, and during his minority the State is being managed by Government. For six years two European officers held the office of Administrator, but this post was abolished in 1904 and a native officer was appointed as Superintendent. The young chief,

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The State is in charge of a Political Agent for the Feudatory States, under the supervision of the Commissioner, Chhattisgarh Division. For administrative purposes Bastar is divided into five *tahsils*, each in charge of a *tahsildār*. The Superintendent of the State is at present an Extra-Assistant Commissioner and has two Assistants with magisterial powers. The State also employs European Forest and Medical officers. There are seven subordinate *zamīndārī* estates covering 4,189 square miles, situated mainly to the south of the Indrāvati. The total revenue in 1904 was 2.76 lakhs, the main items being land (Rs. 1,15,000), including cesses, arrears, and miscellaneous receipts, forests (Rs. 65,000), and excise (Rs. 70,000). A revised assessment of land revenue has recently been sanctioned. The net demand for land revenue in 1904 was only Rs. 83,000, a considerable proportion being 'assigned.' A cadastral survey has been effected in 647 villages of the Jagdalpur *tahsil*, and in most of these a regular settlement based on soil classification has been carried out. The remaining area is summarily settled, the rates being fixed on the seed required for each holding, or on the number of ploughs in the possession of the cultivators. The incidence of the land revenue per cultivated acre in the regularly settled tract is 5 annas 1 pie. The total expenditure in 1904 was 2.52 lakhs, the principal heads being Government tribute (Rs. 15,600), allowances to the ruling family (Rs. 24,000), administration (Rs. 32,000), forests (Rs. 15,000), excise (Rs. 15,000), land revenue settlement (Rs. 7,700), and public works (Rs. 37,000). The tribute is liable to revision. Since 1893 the State has expended 5.68 lakhs on public works, under the supervision of the Engineer of the Chhattisgarh States division. The works carried out include, besides the roads already mentioned, residences for the chief and the Administrator and for the *zamīndār* of Bhopālpattam, office buildings at Jagdalpur and the head-quarters of *tahsils*, and a school, dispensary, and *sarai* at Jagdalpur. The State maintains 51 schools, including an English middle school at Jagdalpur, 4 vernacular middle schools, and a girls' school, with a total of about 3,000 pupils. The expenditure on education in 1904 was Rs. 11,000. Only 1,997 persons were returned as able to read and write in 1901, the proportion of literate males being 1.2 per cent. Dispensaries have been established at Jagdalpur, Antāgarh, Kondegao, Bhopālpattam, Kondā, and Bijāpur, at which 59,000 persons were treated in 1904, and Rs. 12,000 was expended on medical relief.

**Bastī District.**—North-western District of the Gorakhpur Division,

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identification has been abandoned in favour of a site just outside the north-east angle of the District, in Nepāl. The northern part had certainly relapsed into jungle by the fifth century A.D., when it was visited by Fa Hian, though the ruins of earlier buildings were numerous. The traditions of the Rājput clans who now hold the District point to the conclusion that they began to enter it late in the thirteenth century, displacing the Bhars and the Domkatārs; but little reliance can be placed on them. A number of petty Rājās held the country and fought with each other. In Akbar's reign the Muhammadans penetrated the District after taking Gorakhpur, and maintained a garrison at Maghar; and Bastī was included in the *Sūbah* of Oudh. About 1610 the Muslims were expelled; but they returned in force in 1680, and opened up the country. Most of the District was included in the Gorakhpur *sarkār*, and its later history is that of GORAKHPUR DISTRICT, from which it was only separated in 1865, though ceded to the British by the Nawāb Wazīr of Oudh in 1801.

Many ancient mounds are found in the District, but few have been excavated. Bhuilā, already referred to, was examined by General Cunningham and his assistant<sup>1</sup>. A *stūpa* at Piprahwa in the north of the District was recently excavated, and yielded an interesting find of relics in an inscribed casket<sup>2</sup>. Gupta coins are occasionally found in various localities. The only Muhammadan building of interest is the shrine of Kabīr at MAGHAR.

Bastī contains 4 towns and 6,903 villages. Population is increasing steadily. The numbers at the last four enumerations were as follows: (1872) 1,473,029, (1881) 1,630,612, (1891) 1,785,844, and (1901)

Population. 1,846,153. There are five *tahsils*—DOMARIĀGANJ, BĀNSĪ, HARAIYĀ, BASTĪ, and KHALĪLĀBĀD—the head-quarters of each being at a place of the same name. BASTĪ, the District head-quarters, is the largest town. The following table gives the chief statistics of population in 1901:—

Tahsil.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Domariāganj .	593	1	1,111	322,321	544	+ 2.9	9,470
Bānsī .	621	1	1,343	402,277	648	+ 10.9	9,938
Haraiyā .	478	...	1,461	333,801	698	- 5.1	9,395
Bastī .	536	1	1,600	393,079	733	+ 4.0	12,808
Khalilābād .	564	1	1,388	394,675	700	+ 3.7	10,393
District total	2,792	4	6,903	1,846,153	661	+ 3.4	52,004

<sup>1</sup> *Archaeological Survey Reports*, vol. xii, p. 108.

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crops are, however, poppy, grown on 33 square miles, and sugar-cane, grown on 68. Oilseeds are also important, covering 136 square miles.

<i>Tahsīl.</i>	Total.	Cultivated.	Irrigated.	Cultivable waste.
Domariāganj . . .	593	427	142	80
Bānsī . . .	621	463	144	64
Haraiyā . . .	478	338	211	75
Bastī . . .	536	387	238	70
Khalīlābād . . .	564	394	234	76
Total	2,792	2,009	969	365

At the time of its cession to the British in 1801, the District was in a very depressed condition. A settled government soon gave an impetus to cultivation, and led to the introduction of the more valuable crops, sugar-cane and poppy. During the thirty years preceding the last settlement the cultivated area increased by 13 per cent., or, including the jungle grants in the north of the District, by 20 per cent. In the last fifteen years there has been a further small increase of about 2 per cent. and a still larger rise in the area double cropped. There has been no appreciable change in the staples grown. Advances are taken freely under the Agriculturists' Loans Act, and amounted to a total of 1.2 lakhs during the ten years ending 1901, of which Rs. 51,000 was lent in the famine year 1896-7. From Rs. 2,000 to Rs. 3,000 has been advanced annually since 1900.

The cattle of the District are generally inferior, but those bred in the Mahūlī *pargana* are a little above the average. Buffaloes are largely kept for milk. Ponies are used a good deal both for riding and as pack-animals, but are of a very poor stamp. Sheep and goats are chiefly kept for the supply of wool, skins, and manure.

In 1903-4, 323 square miles were irrigated from wells, 435 from tanks and swamps, and 211 from other sources. Wells are chiefly important in the southern half of the upland area between the Gogra and Rāptī, and their use decreases as the latter river is approached. North of the Rāptī they are hardly used at all. Water is invariably raised from them by the lever or by two pots slung on a wheel. The natural ponds and swamps, which are so numerous in the District, are everywhere used for irrigation, in addition to the small tanks which have been excavated. The swing-basket is used to raise water from these sources of supply. The larger rivers are not used at all for irrigation, as their beds lie too low; but the smaller streams are held up by small temporary earthen dams, and their water is turned into the rice-fields as required. In the north-east of the District two European grantees have constructed a series of works which effectually protect about 52,000 acres of rice land. The valleys of several

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Mention of the famines experienced in Bastī District up to 1865, when it became a separate Collectorate, will be found in the article

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**Famine.** scarcity was felt. The rains of 1873 were light and

the following spring crop could not be sown. Relief works were opened, and in May, 1874, the daily muster rose to 127,000; but it was held afterwards that relief had been too lavish. A similar failure of the rains in 1877 caused distress in 1878, and relief works were again required. In 1896-7 distress was felt; but this was due to the pressure of high prices on the labouring classes rather than to a failure of the crops. Relief works were opened, but the proportion of the population who came to them was small.

The Collector is usually assisted by five Deputy-Collectors recruited in India, and a *tahsildār* is stationed at the head-  
**Administration.** quarters of each *tahsīl*.

There are two District Munsifs, and the system of Village Munsifs was introduced in 1902. Bastī is comprised within the Civil and Sessions Judgeship of Gorakhpur; but sessions cases are tried by the Judge of Jaunpur, who is a Joint Sessions Judge for this purpose. Crime is on the whole light, and the District is not noted for any particular form. Infanticide was formerly suspected, but no villages are now proclaimed under the Act.

Bastī was acquired by cession in 1801, but up to 1865 it formed part of Gorakhpur District. The quarrels of the Rājās and the failure of the Oudh government to introduce any system of administration had reduced the country to a miserable state. The early settlements, based chiefly on the previous collections, were for short periods, and at first were made with the Rājās or large proprietors at lump sums for whole estates. In 1838-9 the first regular settlement was made under Regulation IX of 1833. It was based on a survey, and it recognized the *birtīās* or under-proprietors, from whom engagements were taken direct for the first time. The revenue fixed was 9.7 lakhs, which was more than double the former revenue. This settlement was revised between 1859 and 1865 by various officers working on different methods, but principally relying on estimates of the rental 'assets,' and the demand was increased to 12.8 lakhs. The latest revision was made between 1883 and 1890, and Bastī was one of the first Districts to be resettled on the basis of the actual rents paid. The revenue demand amounted to 19.4 lakhs, or 46 per cent. of the corrected rent-roll, the incidence per acre being Rs. 1-1, varying from R. 0.8 to Rs. 1.7.

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There are two District Munsifs, and the system of Village Munsifs was introduced in 1902. Bastī is comprised within the Civil and Sessions Judgeship of Gorakhpur; but sessions cases are tried by the Judge of Jaunpur, who is a Joint Sessions Judge for this purpose. Crime is on the whole light, and the District is not noted for any particular form. Infanticide was formerly suspected, but no villages are now proclaimed under the Act.

Bastī was acquired by cession in 1801, but up to 1865 it formed part of Gorakhpur District. The quarrels of the Rājās and the failure of the Oudh government to introduce any system of administration had reduced the country to a miserable state. The early settlements, based chiefly on the previous collections, were for short periods, and at first were made with the Rājās or large proprietors at lump sums for whole estates. In 1838-9 the first regular settlement was made under Regulation IX of 1833. It was based on a survey, and it recognized the *birtīās* or under-proprietors, from whom engagements were taken direct for the first time. The revenue fixed was 9.7 lakhs, which was more than double the former revenue. This settlement was revised between 1859 and 1865 by various officers working on different methods, but principally relying on estimates of the rental 'assets,' and the demand was increased to 12.8 lakhs. The latest revision was made between 1883 and 1890, and Bastī was one of the first Districts to be resettled on the basis of the actual rents paid. The revenue demand amounted to 19.4 lakhs, or 46 per cent. of the corrected rent-roll, the incidence per acre being Rs. 1-1, varying from R. 0.8 to Rs. 1.7.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees :—

was Rs. 4,22,000, and for cesses Rs. 78,000. The density of population, 733 persons per square mile, is the highest in the District. The *tahsīl* stretches north from the Gogra in the upland portion of the District, and is crossed by the Kuwānā and a number of smaller streams. The area under cultivation in 1903-4 was 387 square miles, of which 238 were irrigated. Wells supply more than half the irrigated area, and tanks and swamps are a more important source than rivers.

**Bastī Town.**—Head-quarters of Bastī District and *tahsīl*, United Provinces, situated in  $26^{\circ} 47' N.$  and  $82^{\circ} 43' E.$ , on the Bengal and North-Western Railway and on the Gorakhpur-Fyzābād road. Population (1901), 14,761. The town became the residence of a local Rājā in the seventeenth century, but was never of importance. For some time before the Mutiny it was the site of an opium storehouse and treasury, and in 1865 it became the head-quarters of a new District. Bastī consists of the old village, in which the Rājā's fort is situated, a new bazar which has sprung up on the road south of this, and the civil station. It is the head-quarters of the Church Missionary Society in the District, which maintains the high school; and besides the usual offices there is a dispensary. The town is administered under Act XX of 1856, with an income of about Rs. 4,000. There is little trade. Two schools for boys contain 330 pupils, and a small girls' school has an attendance of 15.

**Baswa.**—Head-quarters of the *tahsīl* of the same name in the Daosa *nizāmat* of the State of Jaipur, Rājputāna, situated in  $27^{\circ} 9' N.$  and  $76^{\circ} 36' E.$ , on the Rājputāna-Mālwa Railway, 63 miles east-by-north-east of Jaipur city and 128 miles south of Delhi. Population (1901), 5,908. The mud walls which surround the town are breached in several places, and the small fort is in a dilapidated condition. The town possesses a post office, and three schools attended by about 160 boys. A fair, held yearly in April near the railway station, is visited by 7,000 to 8,000 Muhammadans. The town is locally famous for its red and black terra-cotta pottery; and in its neighbourhood are some very old palaces, a reservoir, and a temple attributed to a Rājā named Har Chand.

**Batāla Tahsīl.**—*Tahsīl* of Gurdāspur District, Punjab, lying between  $31^{\circ} 35'$  and  $32^{\circ} 4' N.$  and  $74^{\circ} 52'$  and  $75^{\circ} 34' E.$ , with an area of 476 square miles. It stretches south-east and north-west between the Rāvi and the Beās, and consists of strips of alluvial country along these two rivers, with a fertile plateau between them irrigated by the Bāri Doāb Canal and the Kiran (District) Canal. The population in 1901 was 305,867, compared with 300,644 in 1891. The head-quarters are at the town of BATĀLA (population, 27,365). It also contains the towns of SRĪGOBINDPUR (4,380) and DERA NĀNAK (5,118); and 478

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vinces, situated in  $26^{\circ} 56'$  N. and  $78^{\circ} 33'$  E., at a bend of the Jumna, 41 miles south-east of Agra city. Population (1901), 2,189. The place is celebrated for its fair, the largest in the District. Originally this was a religious festival, the great day being on the full moon of Kārtik (October–November), but it is now also celebrated as a cattle fair. Horses, cattle, camels, and even elephants are exhibited, and remounts for the native army and police are often bought here. For convenience, a branch Government treasury is opened at the time of the fair. In 1904 the stock shown included 35,000 horses and ponies, 18,000 camels, 10,000 mules and donkeys, and 79,000 head of cattle; and Rs. 13,000 was collected on account of bridge tolls, registration fees, and shop rents.

**Baud State.**—The most westerly of the Tributary States of Orissa, Bengal, lying between  $20^{\circ} 13'$  and  $20^{\circ} 53'$  N. and  $83^{\circ} 35'$  and  $84^{\circ} 48'$  E., with an area of 1,264 square miles. It is bounded on the north by the Mahānadī river, separating it from Sonpur and Athmallik; on the east by Daspallā; on the south by the Khondmāls; and on the west by Patnā and Sonpur, from which it is separated by the Tel river.

The State is one of the oldest in Orissa, and is said to have been originally founded by a Brāhman, but he being childless adopted a nephew of the Rājā of Keonjhar, who is regarded as the founder of the present family. The list of chiefs contains forty-five names, who are said to have ruled for nearly 1,400 years. The State was formerly of considerable extent, but from time to time portions were wrested from it by more powerful neighbours, and Athmallik, which was for centuries part of Baud and acknowledged its suzerainty, is now quite separate. The large tract known as the KHONDMĀLS, with an area of about 800 square miles, which originally belonged to Baud, was made over to the British Government in 1835 by the chief, who was unable to control the Khonds or to put a stop to their human sacrifices; and it was in 1891 formed into a subdivision of Angul District. The State as now constituted yields an estimated revenue of Rs. 64,000, and pays to the British Government a tribute of Rs. 800. The population decreased from 89,551 in 1891 to 88,250 in 1901. The falling off is due, as in the case of the Khondmāls, partly to the prevalence of epidemic disease and the general unhealthiness of the climate, and partly to the emigration of many migratory Khonds during the scarcity which occurred in 1900. The number of villages is 1,070, and the density is 70 persons per square mile. Of the total population, 87,988 claim to be Hindus, but many of them are really Hinduized aborigines. The most numerous castes are the Gaurs (23,000), Khonds (15,000), Pāns (9,000), Sudhās (7,000), and Chāsas (4,000). The Khonds (*see* KHONDMĀLS) are giving up their primitive customs and beliefs, and endeavouring to amalgamate with their Hindu neighbours. The land is fertile and is

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**Bāvda** (*Bāvada*).—Petty chiefship feudatory to the Kolhāpur State, within the Political Agency of Kolhāpur and the Southern Marāthā Country, Bombay, lying between  $16^{\circ} 25'$  and  $16^{\circ} 44'$  N. and  $73^{\circ} 52'$  and  $74^{\circ} 8'$  E. *See* KOLHĀPUR STATE.

**Bāvisi Thāna**.—Petty State in MAHĪ KĀNTHA, Bombay.

**Bavliari**.—Seaport on the creek of the same name, in the Dhandhuka *tāhuka* of Ahmadābād District, Bombay, situated in  $22^{\circ} 4'$  N. and  $72^{\circ} 7'$  E. Population (1901), 980. In 1903-4 the imports and exports were each valued at 8 lakhs, the chief articles of trade being cotton, grain, *ghī*, piece-goods, coco-nuts, oil, molasses, and timber.

**Baw**.—One of the Southern Shan States, Burma. *See* MAW.

**Bāwal Nizāmat**.—A *nizāmat* or administrative district of the Nābha State, Punjab, lying between  $28^{\circ}$  and  $28^{\circ} 25'$  N. and  $76^{\circ} 15'$  and  $76^{\circ} 45'$  E., with an area of 281 miles. The population in 1901 was 71,430, compared with 68,147 in 1891. It contains one town, BĀWAL (population, 5,739), the head-quarters: and 164 villages. The land revenue and cesses amounted in 1903-4 to 2.2 lakhs. The *nizāmat* consists of three separate pieces of territory: Bāwal proper, Kanti-Kalīna, and the isolated village of Mukandpur Basi. Bāwal proper lies south of Rewāri, a *tahsīl* of the British District of Gurgaon, and forms a wedge jutting southwards into the Alwar and Jaipur States of Rājputāna. It is separated by the Rewāri *tahsīl* from the *pargana* of Kanti-Kalīna, 21 miles long by  $9\frac{1}{2}$  broad, lying parallel to the Nārnaul *nizāmat* of the Patiāla State. The whole *nizāmat* is geographically a part of the Rājputāna desert, being an arid, rainless tract, singularly destitute of trees, streams, and tanks, though the Sāwi, a seasonal torrent which rises in the Jaipur hills, passes through the southern edge of the Bāwal *pargana*. It is divided into the two police circles of Bāwal Kānti and Chauki Deb-Kalān.

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**Bāzār.**—Valley in the Khyber Political Agency, North-West Frontier Province, running east and west between the Surghar range on the south, the Ilācha Ghar or eastern extension of the Safed Koh on the east, and the Turo Sar range to the north, between  $33^{\circ} 38'$  and  $35^{\circ}$  N. and  $70^{\circ} 37'$  and  $71^{\circ}$  E. Its elevation ranges from 3,000 to 4,000 feet, and that of the enclosing hills from 5,000 to 7,000 feet. The valley is sterile in the extreme, save where the village lands are irrigated from the hill streams. The people are Afrīdis of the notorious Zakka Khel or clan, the most active thieves on the frontier, against whom on three occasions punitive expeditions have been sent. In 1878 their attacks on the line of communications in the Khyber during the second Afghān War compelled a punitive expedition. Major Cavagnari led an armed body of Kuki Khel Afrīdis, supported by guns, against them, and inflicted some punishment; but a regular expedition followed in December, which effectively chastised them at small cost of life. Nevertheless the clan continued to give trouble, and another expedition had to be sent into the valley in 1879, after which the clan submitted. In 1897 two columns under Sir William Lockhart entered the valley by the Chora and Ilācha passes at its eastern extremity, and destroyed the principal villages.

**Beās** (*Hyphasis* of the Greeks; *Arjīkūja* of the Vedas; Sanskrit, *Vipāsa*).—One of the 'five rivers' of the Punjab from which the Province derives its name. Rising on the southern face of the Rohtang pass in Kulū, 13,326 feet above the sea, the Beās traverses the State of Mandī and enters Kāngra District at Sanghol, 1,920 feet above sea-level. During the early part of its course the fall averages 125 feet per mile. A fine suspension bridge spans the river at Mandī town, and a bridge of boats is kept up during the cold season at Dera Gopipur in Kāngra District. During its lower hill course the Beās is crossed by numerous ferries, at many of which the means of communication consists of inflated skins (*darais*). Lower down it meanders in a westerly course through hilly country, with a fall of 7 feet to the mile, and forms the main channel for the drainage of Kāngra. Near Reh in that District it divides into three channels, which reunite after passing Mirthal, 1,000 feet above sea-level. On meeting the Siwālik Hills in Hoshiārpur, the river sweeps sharply northward, forming the boundary between that District and Kāngra. Then bending round the base of the Siwāliks, it takes a southerly direction, separating the Districts of Hoshiārpur and Gurdāspur. In this portion of its course through the uplands of the Punjab plains, a strip of low alluvial soil fringes its banks, subject in flood-time to inundation from the central stream. The main channel is broad and ill-defined, full of islands and expanding from time to time into wide pools. The depth does not exceed 5 feet in the dry season, increasing to 15 feet during the rains. Broad flat-bottomed country

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**Bechrāji.**—Temple in the Kadi *prānt*, Baroda State, situated about 23 miles from the town of Kadi, and about the same distance from Modhera. The temple has been built in the jungle, and is surrounded by large and costly works designed for the accommodation of pilgrims and others—wells, tanks, *dharmśālas*, dispensary, &c. In the months of Aswin (September–October) and Chaitra (March–April) crowds of devotees visit the shrine from all parts of Gujarāt and make their offerings to the goddess. From these offerings and from the rich endowments given by former Gaikwārs the expenses of the temple are met.

**Bedadanūru Coal-field.**—Bedadanūru is a hamlet in the Polavaram minor *tāluk* of Godāvari District, Madras, situated in  $17^{\circ} 15' N.$  and  $81^{\circ} 14' E.$ , about 10 miles from Jangareddigudem on the Ellore-Prakkilanka road. It is the centre of a small coal-field, where the Barākar stage of sandstone outcrops over an area of about  $5\frac{1}{2}$  square miles. This is the only coal-field lying entirely within the Madras Presidency; but though prospecting has been carried on for some years, no paying seam has as yet been discovered.

**Bedla.**—Principal town of an estate of the same name in the State of Udaipur, Rājputāna, situated in  $24^{\circ} 38' N.$  and  $73^{\circ} 42' E.$ , on the left bank of the Ahār stream, about 4 miles north of Udaipur city. Population (1901), 1,222. It contains a mission school attended by 30 boys. The estate is held by the second noble of Mewār, who is styled Rao. It consists of 111 villages, the majority of which are situated to the north of Chitor; among them is Nagari, one of the oldest places in Rājputāna and mentioned in the article on *CHITOR*. The income is about Rs. 64,000, and a tribute of Rs. 4,100 is paid to the Darbār. The Raos of Bedla are Chauhān Rājputs, and claim direct descent from Prithwī Rāj, the last Hindu king of Delhi. Bakht Singh, the great-grandfather of the present Rao, brought the European residents of Nīmach from Dūngla to Udaipur during the Mutiny of 1857, by the order of Mahārānā Sarūp Singh. For these services he received a sword of honour and was subsequently created a Rao Bahādur and a C.I.E.

**Bednor.**—Estate and head-quarters thereof in Udaipur State, Rājputāna. See *BADNOR*.

**Bedsa.**—Village in the Māval *tāluka* of Poona District, Bombay, 5 miles south-west of Khadkālā station on the Great Indian Peninsula Railway, which gives its name to a group of caves of the first century A. D. Population (1901), 171. The caves lie in  $18^{\circ} 43' N.$  and  $73^{\circ} 35' E.$ , in the Supati hills, which rise above Bedsa village to a height of about 300 feet above the plain, and 2,250 feet above sea-level. The two chief caves are a chapel or *chaitya* and a dwelling cave or *layana*, both of them imitating wooden buildings in style. The chapel is approached by a narrow passage 40 feet long between two blocks of rock about

**Bechrāji.**—Temple in the Kadi *prānt*, Baroda State, situated about 23 miles from the town of Kadi, and about the same distance from Modhera. The temple has been built in the jungle, and is surrounded by large and costly works designed for the accommodation of pilgrims and others—wells, tanks, *dharmasālas*, dispensary, &c. In the months of Aswin (September–October) and Chaitra (March–April) crowds of devotees visit the shrine from all parts of Gujarāt and make their offerings to the goddess. From these offerings and from the rich endowments given by former Gaikwārs the expenses of the temple are met.

**Bedadanūru Coal-field.**—Bedadanūru is a hamlet in the Polavaram minor *tālūk* of Godāvāri District, Madras, situated in  $17^{\circ} 15' N.$  and  $81^{\circ} 14' E.$ , about 10 miles from Jangareddigūdem on the Ellore-Prakkilanka road. It is the centre of a small coal-field, where the Barākar stage of sandstone outcrops over an area of about  $5\frac{1}{2}$  square miles. This is the only coal-field lying entirely within the Madras Presidency; but though prospecting has been carried on for some years, no paying seam has as yet been discovered.

**Bedla.**—Principal town of an estate of the same name in the State of Udaipur, Rājputāna, situated in  $24^{\circ} 38' N.$  and  $73^{\circ} 42' E.$ , on the left bank of the Ahār stream, about 4 miles north of Udaipur city. Population (1901), 1,222. It contains a mission school attended by 30 boys. The estate is held by the second noble of Mewār, who is styled Rao. It consists of 111 villages, the majority of which are situated to the north of Chitor; among them is Nagari, one of the oldest places in Rājputāna and mentioned in the article on CHITOR. The income is about Rs. 64,000, and a tribute of Rs. 4,100 is paid to the Darbār. The Raos of Bedla are Chauhān Rājputs, and claim direct descent from Prithwī Rāj, the last Hindu king of Delhi. Bakht Singh, the great-grandfather of the present Rao, brought the European residents of Nīmach from Dūngla to Udaipur during the Mutiny of 1857, by the order of Mahārānā Sarūp Singh. For these services he received a sword of honour and was subsequently created a Rao Bahādur and a C.I.E.

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a little manufacture of coarse cotton cloth or *khādi*. It contains a primary school.

**Begāri Canal.**—An important water-channel in the Upper Sind Frontier District, Sind, Bombay. It taps the Indus at its extreme south-eastern boundary, forming for about 50 miles of its course a well-defined line of demarcation between the Frontier District and Sukkur. In 1851 this canal was at its head only 50 feet wide, with a depth of 9 feet. It was enlarged in 1854, when the water was admitted into it from the Indus and reached Jacobābād, 50 miles distant, in sixteen hours. Subsequently, the tail of the canal was enlarged, and extended farther westward. Several improvements have been carried out during the last few years. The entire length of the main canal is 76 miles, and it serves the Districts of Upper Sind Frontier (202 square miles), Sukkur (46 square miles), Kalāt (43 square miles), and Lārkāna (300 acres). About five canals branch directly from it, the principal being the Nur Wah (19 miles) and Mirzā (10 miles). The canal is also connected with the branches of the Ghār Canal. The aggregate cost of these works up to the end of 1903-4 amounted to 17 lakhs; the receipts in the same year were about  $4\frac{1}{2}$  lakhs, and the total charges (exclusive of interest) over one lakh. The gross income was thus 26 per cent. on the capital expended and the net receipts 18.3 per cent. The area irrigated was 495 square miles. The canal is navigable for about 60 miles.

**Begūn.**—Chief town of an estate of the same name in the State of Udaipur, Rājputāna, situated in  $24^{\circ} 59'$  N. and  $75^{\circ} 1'$  E., about 90 miles east-by-north-east of Udaipur city. Population (1901), 3,625, about 70 per cent. being Hindus. The town contains a picturesque palace and a fairly strong fort. The estate, which includes the town and 127 villages, belongs to one of the first-class nobles of Mewār, who is styled Rāwat Sawai. The income is about Rs. 48,000, and a tribute of about Rs. 5,200 is paid to the Darbār. The Rāwats of Begūn belong to the Chondāwat family of the Sesodia Rājputs. In the estate is the village of Menāl, formerly called Mahānāl or the 'great chasm,' which possesses a monastery and Sivaite temple constructed, according to the inscriptions they bear, in 1168 by the wife of the famous Prithwī Rāj Chauhān, whose name was Suhav Devī, *alias* Rūthi Rānī ('the testy queen').

**Begusarai Subdivision.**—North-western subdivision of Monghyr District, Bengal, lying between  $25^{\circ} 15'$  and  $25^{\circ} 47'$  N. and  $85^{\circ} 47'$  and  $86^{\circ} 27'$  E., with an area of 751 square miles. The population in 1901 was 642,966, compared with 611,349 in 1891. It contains 755 villages, but no town; the head-quarters are at BEGUSARAI. The subdivision, which forms a continuation of the fertile alluvial plain of Tīrhut, and supports 857 persons to the square mile, is the most densely

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town. His tomb, of granite and white English marble, is placed beneath a dome erected by the Jām, and is surrounded by a garden. A small establishment is maintained in the town for purposes of conservancy. Cotton cloth and rice constitute the principal imports; oilseeds, *ghī*, and wool the exports. Bela crochet-work is well-known.

**Belā** (or Belā Partābgarh).—Head-quarters of Partābgarh District and *tahsīl*, United Provinces, situated in  $25^{\circ} 55'$  N. and  $82^{\circ}$  E., on the bank of the Sai, at the junction of the main line of the Oudh and Rohilkhand Railway with a branch from Allahābād to Fyzābād, and on a road between the same two places. Population (1901), 8,041. The town derives its name from the temple of Belā Bhawānī near the river. It was founded in 1802 as a cantonment for the Oudh auxiliary force, and after the Mutiny became the head-quarters of a District. The town is well laid out and has been thoroughly drained. Besides the usual offices, it contains a general dispensary and a magnificent female hospital, and there is a branch of the Zanāna Bible and Medical Mission. Belā has been a municipality since 1871. During the ten years ending 1901 the income and expenditure averaged Rs. 10,000. In 1903-4 the income was Rs. 14,000, chiefly derived from octroi (Rs. 8,000) and fees and rents; and the expenditure was Rs. 16,000. There is a flourishing trade in agricultural produce. Three schools have 340 pupils.

**Belagutti**.—Town in the Honnālī *tālūk* of Shimoga District, Mysore, situated in  $14^{\circ} 11'$  N. and  $75^{\circ} 31'$  E., 10 miles south-west of Honnālī town. Population (1901), 2,799. The original form of the name was Belagavatti. It was the seat of a line of Nāga chiefs who called themselves Sindas. They ruled during the twelfth and thirteenth centuries, under the Chālukyas, Hoysalas, and Seunas. The place stands in a plain of fertile black soil.

**Belāpur**.—Village in the Rāhuri *tāluka* of Ahmadnagar District, Bombay, situated in  $19^{\circ} 34'$  N. and  $74^{\circ} 39'$  E., 15 miles north of Rāhuri, on the Dhond-Manmād Railway. Population (1901), 4,630, including Belāpur-Khurd (1,167). It lies on the north bank of the Pravara, which in floods rises to the gates. On the river-side are some picturesque buildings belonging to the Naiks, an old Marāthā family. The chief traders are Mārwarī Vānis and Telis. In 1822 an attempt was made to make Belāpur the centre of a revolt. Troops were to be collected here and at Nandurbār in Khdesh, and in conjunction with the local Kolīs were to make a general attack upon the British posts. The plot was, however, discovered and quashed.

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and the Malprabha, through the south of the District. From their sources among the spurs of the Western Ghāts, these rivers pass eastwards through the plain of Belgaum on their way to the Bay of Bengal. They are bordered by deeply cut banks, over which they seldom flow. None is serviceable for purposes of navigation. In the west the rivers and wells yield a sufficient supply of good water; but towards the east the wells become brackish, and the water-bearing strata lie far below the surface. Except the Kistna, which at all times maintains a considerable flow of water, the rivers sink into insignificant streams during the hot season, and the supply of water falls short of the wants of the people.

In the south of the District is a narrow strip of Archaean gneissic rock, including some hematite schists of the auriferous Dhārwar series. In the centre quartzite and limestone of the Kalādgi (Cuddapah) group are found partly overlaid by two great bands of basalt belonging to the Deccan trap system, and in the north and west basalt and laterite occur. Several of the river valleys contain ancient alluvial deposits of upper pliocene or pleistocene age, consisting of clay with partings and thin beds of impure grits and sandstones. In the banks of a stream that flows into the Ghatprabha at Chikdauli, 3 miles north-east of Gokāk, were found some remarkable fossil remains of mammalia, including an extinct form of rhinoceros<sup>1</sup>.

Of the typical trees of the District, *māti* (*Terminalia tomentosa*), *jāmbul* (*Eugenia Jambolana*), *nāna*, *harda*, *sisva*, and *hasan* (*Pterocarpus Marsupium*) yield valuable timber; *kārvi* (*Strobilanthus Grahamianus*) and small bamboos are used for fencing and roofing, and *kumba* (*Careya arborea*) is in demand for the manufacture of field tools. The *harda* and *hela* (*Terminalia belerica*) furnish myrabolams, and the *shemba* (*Acacia concinna*) supplies the *rittha* or soap-nut which is used in cleaning clothes. The chief fruit trees are the mango, jack, custard-apple, bullock's-heart, cashew-nut, *jāmbul*, *bael*, wood-apple, pummelo, sweet lime, citron, lime, orange, *kokam*, *avla*, *bor*, *turan*, *gutī*, *agastī*, horse-radish tree, guava, pomegranate, *papai*, *karanda*, fig, mulberry, plantain, and pineapple. Among creepers the most noticeable are several species of convolvulus; and a large number of English flowers have been grown from seeds and cuttings.

Antelope are found in the north and east. *Sāmbār*, deer, wild hog, and hyenas are not uncommon in the waste and forest lands. Of the larger beasts of prey, leopards are pretty generally distributed, but tigers are met with only in the south and south-west. Of game-birds there are peafowl, partridge, quail, duck, snipe, teal, *kalam*, and occasionally bustard.

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The District has a considerable Christian population. Of the 5,366 native Christians in 1901 about 5,000 were Roman Catholics. The majority are Konkani or Goa Catholics, who are immigrants from Goa, and are under the jurisdiction of the Archbishop of that place. The others include Madras Catholics and Protestants, who came from Madras about 1817. The chief missions are an Anglican Tamil Mission and the American Methodist Mission, with out-stations at Kanbargi, Nesārgi, and Bail Hongal. Roman Catholic priests are resident in Belgaum, Khānāpur, and Godoli; and there are two orphanages and a rescue home in the District, which are managed by independent trustees, but belong to the Methodist Episcopal Mission. A mission to soldiers, known as the Soldiers' Home, is situated in the cantonment.

The chief varieties of soil are black and red. The black, which is by far the most fertile, is of two kinds. One variety is very friable,

**Agriculture.** but when impregnated with moisture forms a tough clay-like substance, almost impervious to water, and therefore very valuable as a lining for tanks. The other kind is not so tenacious of moisture, and, unless it receives abundance of irrigation, either natural or artificial, not nearly so productive. In order to bring a waste of black soil under tillage, the field must receive three complete ploughings—one direct, one transverse, and one diagonal. It does not receive any further ploughing; but annually before sowing the ground is cleared and the surface loosened with a small knife. The red and sandy soils are very apt to cake and harden after rain, so that the field must be ploughed every year—if possible, once lengthwise and a second time transversely. This is done by a smaller plough of the same construction as the large plough used for black fields, but lighter. Fields of pure black soil do not receive manure; on the other hand, the out-turn from red and sandy lands seems to depend almost entirely on the amount of dressing they have received.

On 'dry' fields, most of the grain, pulses, oilseeds, and fibres are sown; some are cultivated on red and sandy soils during the rainy months; others are grown on black soil as a cold-season crop. Cotton is raised entirely on black soil as a cold-season crop.

The District is almost wholly *ryotwāri*. *Inām* or *jāgīr* lands cover 983 square miles. The chief statistics of cultivation in 1903-4 are shown in the table on the next page, in square miles.

*Jowār*, the staple of the District, occupying 884 square miles, is grown in all parts, especially in Chikodi, Athni, Gokāk, Parasgad, and Sampgaon. *Bājra* covered 297 square miles, chiefly in Athni, Gokāk, and Chikodi. The south-western portion, being too wet for millets, produces rice (176 square miles) and the coarse hill grains. Wheat (157 square miles) is the prominent crop of Parasgad. *Rāle-kāng* or Italian millet occupied 118 square miles. Pulses occupied 333 square

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for rice and vegetables in the best portions of the western half of the District. Of the recently improved reservoirs the chief is the Gadakeri lake about 15 miles south-east of Belgaum, in the Sampgaon *tāluka*, which has an area of 129 acres and a maximum depth of 5 feet. The catchment basin measures 4.68 square miles, and the average rainfall is 29 inches. It supplied 337 acres in 1903-4. The most important water-work is the Gokāk canal and storage reservoir. A masonry weir has been built across the Ghatprabha where its catchment area, including that of its chief tributaries the Tāmraparni and the Harankāshi, is about 1,100 square miles, of which a large extent lies in the Western Ghāts. The storage work and the first section of the canal were completed at a cost of 12.2 lakhs, the capital outlay to the end of 1903-4 being 12.9 lakhs. The Gokāk canals command 28 square miles, and irrigate an average of 16 square miles. Wells used for irrigation are most common in Chikodi and Belgaum. In Khānāpur no wells are used for this purpose. In 1903-4 wells and tanks used for irrigation numbered 12,660 and 1,161 respectively.

In the west of the District, among the spurs of the Western Ghāts, is a considerable area of forest land. Formerly large tracts were yearly

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**Forests.** patches of fire-cleared woodland. This form of tillage has now been limited to small areas, specially set apart for the purpose. The District possesses 665 square miles of 'reserved' and 10 square miles of 'protected' forest. Of this total, 51 square miles are in charge of the Revenue department. It is very unevenly distributed, the large *tālukas* of Athni and Paragad having little or no forest, while Khānāpur has twice as much forest as tillage. The forest administration is under a divisional officer, assisted by a sub-divisional officer. The Belgaum forests may be roughly divided into 'moist' and 'dry,' the 'dry' lying east of the Poona-Harihar road and the 'moist' lying west of the road. The latter includes the forests of Belgaum and Khānāpur, about 500 square miles. The 'dry' forest, about one-eighth of which is stocked with useful wood, is very poor and stony, yielding only firewood scrub with a few small poles fit for hut-building. The produce is chiefly cactus, four kinds of fig, *dindal*, and *tarvār*. The most important trees in the 'moist' forest are teak, black-wood, *honne* (*Pterocarpus Marsupium*), *hirda* or myrabolam, and jack-wood. There are also a few *babūl* Reserves. The forest supplies large quantities of firewood to the Southern Mahratta Railway. The total forest receipts in 1903-4 were 277 lakhs.

Diamonds are said to have been found in the sandstone towards Kolhāpur and gold in the valley of the Malprabha. Iron was formerly smelted in Belgaum, Gokāk, and Sampgaon, and near the Rām pass. The ore is generally peroxide of iron, with a mixture of clay, quartz,

for rice and vegetables in the best portions of the western half of the District. Of the recently improved reservoirs the chief is the Gadakeri lake about 15 miles south-east of Belgaum, in the Sampgaon *tāluka*, which has an area of 129 acres and a maximum depth of 5 feet. The catchment basin measures 4.68 square miles, and the average rainfall is 29 inches. It supplied 337 acres in 1903-4. The most important water-work is the Gokāk canal and storage reservoir. A masonry weir has been built across the Ghatprabha where its catchment area, including that of its chief tributaries the Tāmraparni and the Harankāshi, is about 1,100 square miles, of which a large extent lies in the Western Ghāts. The storage work and the first section of the canal were completed at a cost of 12.2 lakhs, the capital outlay to the end of 1903-4 being 12.9 lakhs. The Gokāk canals command 28 square miles, and irrigate an average of 16 square miles. Wells used for irrigation are most common in Chikodi and Belgaum. In Khānāpur no wells are used for this purpose. In 1903-4 wells and tanks used for irrigation numbered 12,660 and 1,161 respectively.

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The District has suffered from constant scarcities owing to the uncertainty of its rainfall. The earliest recorded failure of rain led to

**Famine.** the great Durgā-devī famine. Subsequent famines

occurred in 1419, 1472-3 (exceptional distress), 1790 (caused by the raids of the Marāthās), 1791-2 (failure of early rain), 1802-3 (caused by the depredation of the Pindāris), 1832-3, 1853, and 1876-7. The need of Government help began about the middle of September, 1876. At the height of the famine in May, 1877, there were 43,196 persons on relief works and 7,641 in receipt of gratuitous relief. After fifteen years the District again (1892) suffered from famine, which chiefly affected three of its *tālukas*, Athni, Gokāk, and Parasgad, and relief works were opened. In 1896 the rains were indifferent, and nearly one-third of the total area of the District was distressed, relief being again required. In 1899 the rains failed, bringing on intense scarcity in Athni, Gokāk, Parasgad, and part of Chikodi. Relief works were opened in December, 1900, and continued till October, 1902. The highest number relieved in a day on works was 16,313 (excluding 5,672 dependents) in August, 1901, 5,876 being in receipt of gratuitous relief. It is calculated that the excess of mortality over the normal during the three years was 60,000, and that 100,000 cattle died. Exclusive of advances to the agriculturists and remissions, the famine in the District cost 5 lakhs. Remissions of land revenue and advances amounted to about 2 lakhs.

The District is divided into seven *tālukas* : ATHNI, CHIKODI, BELGAUM, GOKĀK, SAMPGAON, KHĀNĀPUR, and PARASGAD. The Collector

**Administration.** is usually assisted by two officers of the Indian Civil Service and one Deputy-Collector recruited in India. There are three petty subdivisions (*pethas*) : Murgod in Parasgad, Hukeri in Chikodi, and Chandgad in the Belgaum *tāluka*.

The District and Sessions Judge at Belgaum is assisted by five Subordinate Judges for civil business. There are altogether seventeen officers to administer criminal justice in the District. The commonest offences are burglary and theft.

On the acquisition of Belgaum in 1818 the Marāthā assessment remained for a time unrevised, although Bājī Rao's revenue-farming system, which had wrought great havoc in the District, was immediately suspended in favour of the personal or *ryotwāri*, then known as the Madras system. A survey was attempted during the first ten years

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of which 37 were private institutions, attended by 12,927 pupils, including 1,867 girls. Of the public institutions, 2 are high schools, 6 middle, and 307 primary schools. Of the institutions classed as public, one is supported by Government, 220 are managed by local, 30 by municipal boards, and 64 are aided. The total expenditure on education in 1903-4 was 1.38 lakhs, of which Rs. 22,500 was derived from fees, and Rs. 34,000 was contributed by Local funds. Of the total, 75 per cent. was devoted to primary education.

Belgaum District contains one hospital, five dispensaries, and one railway medical institution, accommodating 86 in-patients. In these institutions 48,000 patients were treated in 1904, including 714 in-patients, and 1,386 operations were performed. The total expenditure, exclusive of the railway dispensary, was about Rs. 14,500, of which about Rs. 6,000 was met from municipal and Local funds.

The number of persons successfully vaccinated in 1903-4 was 20,758, representing a proportion of 21 per 1,000 of population, which is lower than the average for the Presidency.

[Sir J. M. Campbell, *Gazetteer of the Bombay Presidency*, vol. xxi (1884); J. F. Fleet, *Dynasties of the Kanarese Districts* (1896); E. Stack, *Memorandum on Land Revenue Settlements* (Calcutta, 1880).]

**Belgaum Tāluka.**—Central *tāluka* of Belgaum District, Bombay, lying between 15° 41' and 16° 3' N. and 74° 2' and 74° 43' E., with an area, including the Chandgad petty subdivision (*petha*), of 644 square miles. It contains one town, BELGAUM (population, 36,878), the head-quarters; and 201 villages. The population in 1901 was 137,562, compared with 147,150 in 1891, the decrease being largely due to the ravages of plague. The density, 214 persons per square mile, is about the average for the District. The demand for land revenue in 1903-4 was 1.9 lakhs, and for cesses Rs. 16,000. In the north-west of Belgaum, long sandstone ridges border and in many places cross the central plain. In the west, close to the Western Ghāts, the climate is damp, while to the east it is more pleasant. The annual rainfall is fairly heavy, averaging 52 inches. Round Belgaum town the country is richly cultivated.

**Belgaum Town.**—Head-quarters of the District of the same name in the Southern Division of the Bombay Presidency, situated in 15° 51' N. and 74° 31' E., at an elevation of nearly 2,500 feet above sea-level, on the northern slope of the basin of a watercourse called the Bellary nullah, and on the Southern Mahratta Railway. Population (1901), 36,878, including the cantonment (10,641) and suburbs (3,803). The municipality was established in 1851. During the ten years ending 1901 the income averaged about Rs. 50,000. In 1903-4 the income was Rs. 51,500, chiefly derived from octroi (Rs. 22,000), conservancy rates (Rs. 9,100), and taxes on houses and land (Rs. 4,600). The

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**Beliapatam.**—Village and river in Malabar District, Madras. See VALARPATTANAM.

**Bellamkonda** ('the hill of caves').—Hill fortress in the Sattanapalle *tāluk* of Guntūr District, Madras, situated in  $16^{\circ} 30'$  N. and  $80^{\circ}$  E. The works consist of a single stone wall, connecting the elevated points of the hill and having bastions at the south-east and north-west angles, which terminate the two extremities of the principal front. The entrance, which is in this front, at about a third of its length from the north-west bastion, is gained by a winding pathway from the foot of the hill near the village. In shape, the fort is roughly an equilateral triangle, enclosing an area of irregular elevation of about one-sixteenth of a square mile. The wall is in a very ruinous state, every shower loosening and bringing down parts of it. The two bastions are the most perfect parts, but even these from their overhanging position seem to threaten destruction to everything below. The interior is overgrown with bushes and long grass, which obstruct the passage to the eastern and western faces in many parts. There still remain some buildings of stone, the old magazine and storerooms. The highest point is 1,569 feet above the sea. The early history of the fortress is obscure. It is said to have been constructed by the Reddi kings of KONDAVĪD. After their power had passed away in 1482 it perhaps fell into the hands of the Orissa kings, for Firishta says it was taken by the Sultān of Golconda from a Telugu Rājā who was a vassal of Orissa. In 1531 the Orissa king took the place a second time by a general escalade, regardless of the loss of his best troops. It must afterwards have reverted to the kings of Vijayanagar, for it was finally taken by the Muhammadans in 1578, when they put an end to Hindu rule in this part of the country. At the close of the eighteenth century the English had a few troops stationed at the bottom of the hill in mud huts.

**Bellary District** (*Ballāri*).—The westernmost of the four CEDED DISTRICTS in the Madras Presidency, lying between  $14^{\circ} 28'$  and  $15^{\circ} 58'$  N. and  $75^{\circ} 40'$  and  $77^{\circ} 38'$  E., with an area of 5,714 square miles. It is bounded on the west and north by the river Tungabhadra, which divides it from the Bombay Presidency and the Nizām's Dominions; on the east by Kurnool and Anantapur Districts; and on the south by the State of Mysore.

Bellary lies on the northern slope of the Deccan plateau, and the

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aspects.

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water for more than five months in the year. The sand from its bed, carried by the prevailing south-westerly winds, is perpetually encroaching on the land along its eastern banks. At Moka, 12 miles from Bellary, the sand-beds are nearly 2 miles broad. The channel of the river varies from a quarter to three-quarters of a mile in width, and even at flood-time the water rarely exceeds 4 feet in depth. The Southern Mahratta Railway bridges it at Paramādevanahalli. The Chikka Hagari is a small stream, also rising in Mysore, which, after crossing the western *tāluks*, falls into the Tungabhadra at Kittanūru. Though it comes down occasionally in heavy floods during the monsoons, it is perfectly dry for many months in the year. The irrigation from these rivers is referred to below.

Five-sixths of Bellary is covered with Archaean rocks, granitoid and gneissic, and the little barren hills, characteristic of the Deccan, are formed of these. Superimposed upon them are four well-marked bands of the younger Dhārwar series, which run right across the District from north-west to south-east. The chief of these is the line forming the Sandūr hills, which is remarkable for the immense quantities of rich hematite it contains. There is also an old gold-mine in it. Quartz tops several of the hills, and trap dikes of great length and width are further characteristics of the geology of the District.

In the drier eastern *tāluks* the flora consists largely of such drought-resisting plants as Euphorbias, acacias, and Asclepiads, and the *Acacia arabica* and the *margosa* (*Melia Azadirachta*) are the characteristic trees. In the west the growth is more luxuriant and date-palms flourish in the damper hollows. Over all the waste lands grow the yellow-flowered *Cassia auriculata* and the *Dodonaea*. The chief trees in such forests as the District possesses are referred to under Forests below.

Leopards are fairly numerous in the hills of Sandūr and in the Kūdligi and Harpanahalli *tāluks*, where their depredations on cattle are considerable. Bears are found in the western hills, and hyenas and wolves in Harpanahalli. Wild hog infest the Kampli hills and parts of the Kūdligi *tāluk*, and do much damage to crops. There are also a considerable number of *chinkāra* (gazelle) and antelope in the western *tāluks* and in Adoni, but they are not often to be seen in the flatter eastern *tāluks*. Of the larger game-birds, peafowl and bustard are found in Hadagalli and Harpanahalli. The former are especially common along the banks of the Tungabhadra.

The climate of the District is exceedingly dry throughout and correspondingly healthy. The only parts which are at all malarious are the Kūdligi *tāluk*, where there are numerous hills and tanks (artificial irrigation reservoirs), and the irrigated cultivation along the Tungabhadra. The western *tāluks*, especially Harpanahalli, where the temperature approximates to that of the Mysore plateau, are consider-

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deal when the District was ceded to the Company. Bellary had fallen into the power of Haidar Ali of Mysore and his son Tipū in the latter part of the eighteenth century. At the partition of Tipū's territory in 1792, part of the District fell to the Nizām. At the further partition which occurred after Tipū's defeat and death at Seringapatam in 1799, the Nizām obtained the rest of it; but he ceded both portions and other adjoining territory to the British in 1800. Major (afterwards Sir Thomas) Munro was the first Collector of the country so obtained, called the Ceded Districts, which included the present Districts of Cuddapah, Bellary, Anantapur, and much of Kurnool; and his first care was to reduce to order the eighty *poligārs* whom he found within it. Some of these were pensioned and the estates of the remainder were resumed. In 1808 the tract was split into two Districts, Cuddapah and Bellary. The latter then included the present District of Anantapur. This was formed into a separate Collectorate in 1882, and Bellary District as it now stands has thus been a separate Collectorate for only twenty-four years.

More palaeolithic and neolithic settlements and implements have been found in Bellary than in any other District in Madras, and some of them are of great interest. Round Gollapalle in the Rāyadrug *tāluk* are hundreds of kistvaens of the usual pattern, some of which have been found to contain pottery, bones, &c. Jain temples are numerous, and in the western *tāluk*s are a number of little Chālukyan shrines, covered with most delicate carving in steatite. These are described and illustrated in Mr. Rea's *Chālukyan Architecture*. At Adoni, Bellary, Rāyadrug, and elsewhere are ancient hill fortresses of much interest. But the most important antiquities in the District are the extensive and impressive ruins, near Hampi, of the great capital of the Vijayanagar empire.

The District contains 10 towns and 929 villages. It is divided into 8 *tāluk*s, the head-quarters of which are at the places from which each

is named. Statistics of population according to the  
**Population.** Census of 1901 are given in the table on next page.

The principal towns are the two municipalities of BELLARY, the District head-quarters, and ADONI; and the eight Unions of HOSPET, YEMMIGANŪR, RĀYADRUG, KAMPLI, HARPANAHALLI, KOSIGI, KOTTŪRU, and SIRUGUPPA. The population of the District in 1871 was 911,755; in 1881, 726,275; in 1891, 880,950; and in 1901, 947,214. Hindus form 89 per cent. of the total and Musalmāns 10 per cent. The famine of 1876-8 was very severely felt, and it was not until over twenty years afterwards that the population recovered the loss it then suffered. The percentage of increase during the last decade was a little above the average for the Presidency, in spite of considerable emigration to Mysore. The apparent decline in the Hadagalli *tāluk* is due to the total for 1891

deal when the District was ceded to the Company. Bellary had fallen into the power of Haidar Ali of Mysore and his son Tipū in the latter part of the eighteenth century. At the partition of Tipū's territory in 1792, part of the District fell to the Nizām. At the further partition which occurred after Tipū's defeat and death at Seringapatam in 1799, the Nizām obtained the rest of it; but he ceded both portions and other adjoining territory to the British in 1800. Major (afterwards Sir Thomas) Munro was the first Collector of the country so obtained, called the Ceded Districts, which included the present Districts of Cuddapah, Bellary, Anantapur, and much of Kurnool; and his first care was to reduce to order the eighty *poligārs* whom he found within it. Some of these were pensioned and the estates of the remainder were resumed. In 1808 the tract was split into two Districts, Cuddapah and Bellary. The latter then included the present District of Anantapur. This was formed into a separate Collectorate in 1882, and Bellary District as it now stands has thus been a separate Collectorate for only twenty-four years.

More palaeolithic and neolithic settlements and implements have been found in Bellary than in any other District in Madras, and some of them are of great interest. Round Gollapalle in the Rāyadrug *tāluk* are hundreds of kistvaens of the usual pattern, some of which have been found to contain pottery, bones, &c. Jain temples are numerous, and in the western *tāluk*s are a number of little Chālukyan shrines, covered with most delicate carving in steatite. These are described and illustrated in Mr. Rea's *Chālukyan Architecture*. At Adoni, Bellary, Rāyadrug, and elsewhere are ancient hill fortresses of much interest. But the most important antiquities in the District are the extensive and impressive ruins, near Hampi, of the great capital of the Vijayanagar empire.

The District contains 10 towns and 929 villages. It is divided into 8 *tāluk*s, the head-quarters of which are at the places from which each

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Bellary mission continued under the charge of the Goa priests until 1837. In that year a chaplain was appointed by Government for the Roman Catholic troops at Bellary, and under the double jurisdiction which ensued many more churches and chapels were erected than the number of Catholics required. The Goa jurisdiction ceased with the establishment of the regular hierarchy by an apostolic letter of Pope Leo XIII in 1886. The mission is at present under the direction of the Roman Catholic chaplain, assisted by four Fathers from the Missionary Society of St. Joseph, London. The only Protestant mission in the District is that of the London Missionary Society. It was established in 1810 and has a staff of five missionaries, one of whom is a lady.

The soils of the District are classed as red, mixed, and black; the two former preponderate in the hilly western *tālūks*, and the latter

**Agriculture.** in the level tracts of Bellary, Alūr, Adonī, and Rāyadrug.

The red ferruginous soils are derived from the decomposition of the granitic rocks, and are loams of a more or less sandy character. They are much less fertile than the black cotton soil of the eastern *tālūks*. The average depth of this latter is about 4 feet, but a much greater thickness is found in certain localities. In Alūr it is of particular richness, and the rates of assessment there are the highest in the District. A disadvantage, however, is that, owing perhaps to the underlying beds of soft calcareous limestone, trees will not flourish in it and the water in the wells is frequently brackish.

The seasons of cultivation on the red and mixed soils differ altogether from those on the black. On the former, 'dry' crops are sown at the beginning of the south-west monsoon in June; but the latter is held to require the thorough soaking obtainable only from the later rains of that monsoon, and *korra* (*Setaria italica*) and cotton are sown on it in August and other crops in November. On 'wet' lands rice is sown in May and January and sugar-cane in March. Like the other Deccan Districts, Bellary possesses several ingenious agricultural implements which are almost unknown elsewhere, among them the bamboo seed-drill, the bullock-hoe, and the big iron plough used for eradicating deep-rooted grasses.

There are no *zamīndāris* in the District, but more than a fifth of the total area is *inām* land. Of the total of 5,714 square miles, the village accounts give particulars for 5,697. Details by *tālūks* for 1903-4 are given in the table on the next page, areas being in square miles.

The two principal food-grains are *cholan* (*Sorghum vulgare*) and the *korra* already mentioned. The area under the former in 1903-4 amounted to nearly one-third of the total area cropped. Both are

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from Mysore and sold at the two great annual fairs on the Tungabhadra at Mailār and Ruruvatti. A fine breed of pack-buffaloes, bred in the Nizām's Dominions, is used in Kampli and the neighbouring villages. Ponies are not raised in the District in any number. There are two varieties of sheep, the black or long-fleeced and the white and reddish-brown long-legged variety. The latter are kept chiefly for their manure and flesh; but the former give a fair wool, which is largely used in Rāyadrug, Kūdligi, and Harpanahalli for the manufacture of the cheap black or black and white blankets which serve the ryot as bed, umbrella, portmanteau, or great-coat, as need may require. Goats are reared in large numbers for both milk and manure.

Cattle for the plough and milch kine are fed mainly on *cholam* stalks and cotton-seed. Sheep and the younger cattle are grazed in forest Reserves and on waste lands. Goats, owing to their destructive habits, are confined to waste lands and roadsides.

The area irrigated in 1903-4 was 90 square miles, or little more than 2 per cent. of the total area under cultivation. This was watered in almost equal proportions from Government channels, from tanks, and from wells. Practically the whole of the irrigation from channels is that fed by the Tungabhadra canals. This river is perennial, and provides the only unfailing source of supply in the District. There are ten dams across it, all of which were originally constructed by the Vijayanagar kings, though English engineers have done much to improve and regulate the supply drawn from them. Near one of them is an inscription recording its construction in A.D. 1521 by the famous king Krishna Deva Rāya of Vijayanagar. The area irrigated by them collectively in 1933-4 was about 17,000 acres, of which 12,500 were in the Hospet *tāluks*. The Tungabhadra runs in a deep bed and the ground slopes down towards it, so that it is impossible for them to command much land. Channels dug annually in the beds of the Hagari and Chinna Hagari irrigate small areas in the Rāyadrug and Kūdligi *tāluks*. The great TUNGABHADRA irrigation project, designed to benefit not only Bellary but several other Districts also, is described in the separate account of that river.

The tanks of the District are usually small, irrigating on an average less than 50 acres apiece. The two largest are the Kanekallu tank in Rāyadrug and the Daroji tank in Hospet. The former, which is supplied by a channel from the Hagari, waters 2,300 acres. The Daroji tank, which is said to have been constructed by Tipū Sultān, has an embankment  $2\frac{1}{2}$  miles in length and in some places 60 feet in height. It irrigates about 1,800 acres. Irrigation from wells is commonest in Kūdligi and Rāyadrug. There is room for more of these sources in Harpanahalli and Hadagalli, but in the cotton-soil *tāluks* irrigation is not popular.

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at Adoni, mainly by Muhammadans, have a considerable sale all over the Presidency and also in other parts of India. Woollen blankets are woven in a large number of villages in the Kūdligi and Harpanahalli *tāluka*s, chiefly by Kurubas, the wool being obtained locally. They are exported in large numbers to other Districts. A small amount of ordinary brass-ware is made at Hospet and one or two other villages; and a family or two in the Kūdligi and Harpanahalli *tāluka*s make from soapstone small vessels and little images of Basava, the bull in whose form the founder of the Lingāyat sect is worshipped.

There are seven steam cotton-presses or ginning factories in the District, two at Bellary and five at Adoni. The total number of hands employed in 1904 was 660. A spinning mill established at Bellary in 1894, which is fitted with machinery of the latest pattern, employed an average of 520 hands in 1903-4. The number of spindles was 17,800, producing 650 tons of yarn valued at 4½ lakhs. Several tanneries are at work, but the only one of any size is at Rāyadrug, where 45 hands were employed in 1904. About 45,000 skins were dealt with, producing leather valued at Rs. 40,000. A small distillery at Bellary had an out-turn of 32,000 gallons of spirit, valued at Rs. 37,000.

As is natural from its geographical position, the chief trade of Bellary is with Bombay, the Nizām's Dominions, and Mysore, rather than with the rest of the Madras Presidency. From Bombay are imported rice, turmeric, chillies, metal and metal work (especially brass-ware from Hubli); and in return cereals, silk fabrics, cotton carpets, blankets, and jaggery (coarse sugar) are exported. Cattle, rice, timber, and coco-nut oil are received from Mysore, blankets, oilseeds, and cotton stuffs being exported thither. To the Nizām's Dominions Bellary sends *cholum*, jaggery, cotton and silk fabrics, and receives in return chiefly raw cotton. Trade with other parts of the Presidency is principally in manufactured goods, the raw products of the District being sent in exchange. About three-quarters of the total output of cotton is sent to Madras city.

The chief centres of general trade are Bellary, Adoni, and Hospet, the large trade in cotton being confined to the first two of these. Hospet serves as an entrepôt for the exchange of the products of the western *tāluka*s with the Dhārwar District of Bombay and the Nizām's Dominions, while a great deal of business with both Mysore and Bombay is transacted at the annual fairs at Mailār and Kuruvatti. From the southern parts of the western *tāluka*s large quantities of merchandise are taken to Dāvangere in the Chitaldroog District of Mysore. The ordinary trade is mostly in the hands of the Chetti caste, but a colony of Mārwaris at Bellary controls the export grain trade there. Besides the fairs above mentioned, there are numerous local markets for internal trade. The fees levied at them by the local boards yield about Rs. 7,000 annually.

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For administrative purposes Bellary is arranged into three subdivisions. The four western *tāluka*s of Hospet, Hadagalli, Harpanahalli, and Kūdligi

**Administration.** form one charge, known as the Hospet subdivision, under a Covenanted Civilian. The Bellary subdivision, consisting of Bellary and Rāyadrug, and the Adoni subdivision, consisting of Alūr and Adoni, are usually under Deputy-Collectors recruited in India. Besides the eight *tahsildārs* in charge of these eight *tāluka*s, deputy-*tahsildārs* are stationed at SĪRUGUPPA in the Bellary *tāluka* and at YEMMIGANŪR in Adoni; and stationary sub-magistrates at Bellary, Hospet, Kūdligi, and Adoni. The District Forest officer and the District Superintendent of police reside at Bellary, which is also the headquarters of the Inspector of Schools, Second Circle, of the Superintending Engineer, Third Circle, and of the Assistant Commissioner of Salt and Abkāri Revenue, Bellary Subdivision.

For purposes of civil justice, part of Anantapur (which was originally included in the old Bellary District) comes under the jurisdiction of the District Judge at Bellary; but on the other hand the Adoni *tāluka* is within the Munsifi of Gooty, outside the District, appeals from which area lie to the District Court of Kurnool. There are two District Munsifs, one at Bellary and the other at Hospet. As a rule, fewer cases are dealt with by Village Munsifs in Bellary than in any other District. The number of revenue suits is also extremely small, there being no *zamīndāris* and but few large *ināms*.

The arrangements regarding criminal justice are also anomalous, the Court of Sessions at Bellary taking cognizance of sessions cases in all the *tāluka*s of Anantapur except Gooty and Tādpatri, as well as those in Bellary. The Collector and the three divisional officers are first-class magistrates with the usual powers. All *tahsildārs* and deputy-*tahsildārs*, as well as the stationary sub-magistrates, have second-class powers, and in some cases the *tāluka sheristadārs* are third-class magistrates. Usually very few of the village magistrates use the petty powers with which they are entrusted.

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In 1882 seven of the southern *tālūks* were formed into the separate District of Anantapur. A survey and settlement of the remaining *tālūks* which constitute the present Bellary District were carried out between 1884 and 1896. The excess discovered in the cultivated area was about 5 per cent., and the increase in the assessment effected (which was especially lenient in consideration of the infertility of the District and its losses by bad seasons) was Rs. 85,000, or rather less than 7 per cent. The average assessment on 'dry' land in the cotton-soil *tālūks* of Adoni, Alūr, and Bellary is now R. 0-15-7 per acre (maximum Rs. 2-8, minimum 2 annas), and on 'wet' land Rs. 6-14-11 (maximum Rs. 11, minimum R. 1); while in the remaining red soil *tālūks* the average 'dry' rate is R. 0-8-8 (maximum Rs. 2-4, minimum 2 annas), and the average 'wet' rate Rs. 5-6-3 (maximum Rs. 11, minimum R. 1). Owing partly to the small extent of irrigated land, the average extent of a holding is 15 acres, being greater than in any other Madras District except the Nilgiris.

The revenue from land and the total revenue in recent years are given below, in thousands of rupees:—

	1890-1.	1900-1.	1903-4.
Land revenue . .	18,18	19,63	20,79
Total revenue . .	28,10	30,26	32,30

There are two municipalities in the District, Bellary and Adoni, both established in 1867. Outside their limits local affairs are managed by the District board, and the three *tālūk* boards of Bellary, Hospet, and Adoni, the jurisdictions of which correspond to the subdivisions of the same names. The expenditure of all these boards in 1903-4 was

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There are two municipalities in the District, Bellary and Adoni, both established in 1867. Outside their limits local affairs are managed by the District board, and the three *tālūk* boards of Bellary, Hospet, and Adoni, the jurisdictions of which correspond to the subdivisions of the same names. The expenditure of all these boards in 1903-4 was

boards, four are at *tāluk* and one at a deputy-*tahsildār's* head-quarters. They have a total accommodation of 95 beds, 57 for males and 38 for females. The Bellary hospital, founded in 1842, with a small endowment of Rs. 2,500, has 40 beds. There are also five dispensaries maintained by the boards in certain of the larger villages, and two more by the municipality at Bellary. The total number of cases treated in 1903 was 129,000, of whom 900 were in-patients, and 3,000 operations were performed. The total expenditure was Rs. 31,000. There is a hospital for women at Bellary town, built from subscriptions to the Victoria Memorial Fund, and two others are to be opened shortly at Adoni and Hospet.

Vaccination has been efficiently performed in late years. In 1903-4 the number of persons protected was 32 per 1,000 of the population, compared with the average of 30 for the whole Presidency. Vaccination is compulsory in the two municipalities of Bellary and Adoni, but in none of the nineteen Unions.

[For further particulars of the District see the *Bellary Gazetteer*, by W. Francis (1904).]

**Bellary Subdivision.**—Subdivision of Bellary District, Madras, consisting of the BELLARY and RĀYADRUG *tāluk*s.

**Bellary Tāluk.**—Eastern *tāluk* of the District of the same name, Madras, lying between 14° 57' and 15° 44' N. and 76° 40' and 77° 10' E., with an area of 962 square miles. The population in 1901 was 193,401, compared with 180,353 in 1891. The *tāluk* contains two towns, BELLARY (population, 58,247), the head-quarters and the capital of the District, and SIRUGUPPA (5,805); and 156 villages. The demand for land revenue and cesses amounted in 1903-4 to Rs. 4,23,000, being the highest in the District. As much as four-fifths of the total area, a higher proportion than in any other *tāluk*, is covered with black cotton soil, the remaining fifth being red land. Except in the extreme south, where it is bounded, and in places broken up, by the spurs of the Copper Mountain, it forms a wide level expanse diversified only by low granite hills. It slopes north and north-eastwards towards the Tungabhadra and the Hagari; the Pedda Vanka, one of the streams which carry its drainage into the latter, is of a respectable size. It is the largest, most populous, and best-educated *tāluk* in the District; and it contains the highest proportion of Musalmāns, nearly four-fifths of all the Christians, and an unusual number of the few Jains who are found there. More than half the population speak Kanarese, only a fifth speaking Telugu. The land served by the Tungabhadra channels about Siruguppa is the most fertile in the District. *Cholam* and *korra* are the staple crops, but the area under cotton is large and a considerable amount of *cambu* is grown. The forest area is smaller than in any *tāluk* except Alūr, and the rainfall is the lightest in the District.

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Alī, who made a wonderful forced march, which has been graphically described by Wilks, and routed the Adoni troops. He then, however, seized it for himself and erected the present fortifications. Tradition says that they were designed by a Frenchman in Haidar's service, and that Haidar, finding the fort was commanded by the Face Hill, hanged him afterwards at the main guard gate. The fort was in the possession of Mysore until 1792, when, with others of Tipū's territories, it was given to the Nizām. The Nizām ceded it to the British with the rest of the District in 1800. It did not become the head-quarters of the District until 1840, the Collector until that year living at ANANTAPUR.

Though Bellary is situated 1,400 feet above the sea, its climate is hot and very dry, but it is considered a healthy town. Its great want is a proper water-supply, and it is hoped that the completion of the great irrigation project connected with the TUNGABHADRA will supply this. *Besides being the head-quarters of the District staff, it is also the residence of a Superintending Engineer and an Inspector of Schools.* A company of the Southern Mahratta Railway Volunteer Rifles is also located here, and the town is the head-quarters of the Roman Catholic Mission and of the London Mission. It contains a District jail, with accommodation for 346 prisoners.

The chief educational institution is the Wardlaw College, which was founded as a school in 1846 by the Rev. R. S. Wardlaw, D.D., of the London Mission, and was raised to a second-grade college in 1891. It is the only Arts college in the Ceded Districts. In 1903-4 it had an average daily attendance of 319 students, of whom 17 were in the F.A. class. A high school is maintained by the municipality; and there is a technical class at St. Philomena's high school managed by the nuns of the Order of the Good Shepherd, the pupils of which are almost all Europeans or Eurasians.

Bellary was created a municipality in 1867. The receipts and expenditure during the ten years ending 1902-3 averaged Rs. 80,000 and Rs. 85,000 respectively. The income in 1903-4 was Rs. 1,17,000, and the expenditure Rs. 90,000. Of the former, Rs. 44,000 was contributed by Government, and the rest was principally derived from the house and land taxes and tolls, while the chief items of expenditure included conservancy, roads and buildings, and education. The municipal hospital, known as the Sabhāpati Mudaliyār Hospital, was founded in 1842 and has forty beds. The building was presented by the gentleman whose name it bears. There are two other dispensaries. The industries of Bellary include a small distillery, two steam cotton-presses, and a steam cotton-spinning mill. The latter, established in 1894 and fitted with machinery of the latest pattern, employs 520 hands. The number of spindles is 17,800.

**Bellāvi.**—Town in the Tumkūr *tāluk* of Tumkūr District, Mysore,

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**Bellāvi.**—Town in the Tumkūr *tāluk* of Tumkūr District, Mysore,

consists of a fertile and closely cultivated black soil plain, while in the east the *samīndāri* estates border on the Sātpurā Hills. The demand for land revenue in 1902-3 on the area now forming the *tahsil* was approximately 1.90 lakhs.

**Benares Division.**—South-eastern Division of the United Provinces, lying between  $23^{\circ} 52'$  and  $26^{\circ} 12'$  N. and  $82^{\circ} 7'$  and  $84^{\circ} 39'$  E. The northern portion is traversed by the Ganges and in the east reaches to the Gogra, while the southern extends beyond the Kaimur range and the river Son to the East Sātpurās. The head-quarters of the Commissioner are at Benares city. Population increased from 1872 to 1891, but fell during the next decade. The numbers at the last four enumerations were as follows: (1872) 4,395,252, (1881) 5,178,005, (1891) 5,368,480, and (1901) 5,069,020. There is reason to believe that the Census of 1872 understated the actual population. The decrease between 1891 and 1901 was due partly to an epidemic of fever following disastrous floods in 1894, partly to emigration, and partly to the effects of famine. The total area is 10,431 square miles, and the density is 486 persons per square mile, as compared with 445 for the Provinces as a whole. The Districts north of the Ganges include the most thickly populated area in the United Provinces. In 1901 Hindus formed more than 91 per cent. of the total population, and Musalmāns not quite 9 per cent. There were 2,949 Christians and 1,984 Sikhs. The Division contains five Districts, as shown below:—

	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Benares . .	1,008	882,084	10,45
Mirzāpur . .	5,238	1,082,430	9,93
Jaunpur . .	1,551	1,202,920	14,60
Ghāzīpur . .	1,389	913,818	12,10
Balliā . .	1,245	987,768	8,43
Total	10,431	5,069,020	55,51

This is the only considerable area in the United Provinces of which the revenue is permanently settled. Balliā District lies entirely in the Doāb between the Ganges and Gogra, which form its northern and southern boundaries and meet at its eastern extremity. Jaunpur District is situated in the same Doāb, but does not reach either of the rivers: Ghāzīpur, Benares, and Mirzāpur lie on both sides of the Ganges; but while the first two Districts are situated entirely in the alluvial plain, Mirzāpur stretches many miles south to the Vindhya and East Sātpurās. There are 13,654 villages and only 38 towns; and the Division is remarkable for the number of small hamlets in almost every village, contrasting with the closely-packed central village sites of the Western

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The annual rainfall over the whole District averages nearly 40 inches, varying from 38 in the west to 41 in the east. Fluctuations from year to year are occasionally considerable, but are not so violent as in Districts farther west. In 1876 the fall was only 26 inches, while in 1894 nearly 64 inches were received.

Before the Muhammadan invasion BENARES CITY was at times the capital of a kingdom; but the records of the early period are vague and

unreliable. Tradition relates that aboriginal races, such as the Bhars and Koirīs, once held the District;

but in the twelfth century they certainly owed allegiance to the Rājā of Kanauj. Benares fell into the hands of Muhammad Ghori after the defeat of Jai Chand, and a governor was appointed to dispense justice and repress idolatry. In the fifteenth century the District formed part of the separate kingdom of Jaunpur till its fall; and in the struggles of the next century between Mughal and Pathān it suffered much. Under Akbar it was included in the *Sūbah* of Allahābād, and enjoyed a period of peace until the eighteenth century, when it shared in the troubles that attended the fall of Mughal power. About 1722 the greater part of the present Benares Division was included in the territory governed by Saādat Khān, the first Nawāb of Oudh, who sublet it to Mīr Rustam Ali. The latter was expelled in 1738; and the grant was transferred to his agent, Mansā Rām, an ancestor of the present Mahārājā, who had already acquired a fort in Jaunpur.

Mansā Rām died in 1739; but his son, Balwant Singh, in whose name the grant had been made and who had received the title of Rājā, successfully followed his father's policy. Through a long course of years he endeavoured to make himself practically independent of the Nawāb, his lord-paramount, by building or seizing a line of fortresses on a strong strategical base south of the Ganges. Step by step he acquired new strips of territory, and strengthened each acquisition by fresh military works.

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Ancient remains are found in many places, the oldest being the group of Buddhist ruins at SĀRNĀTH. The famous temples of BENARES CITY are not conspicuous for architectural beauty or for antiquity; and the finest, together with the magnificent line of stone bathing *ghāts* along the Ganges, date principally from the eighteenth century.

The District contains 4 towns and 1,972 villages. Its population increased between 1872 and 1891, and then decreased owing to a series of bad seasons. The numbers at the last four enumerations were as follows: (1872) 794,039, (1881) 892,684, (1891) 921,943, and (1901) 882,084. It is probable that the Census of 1872 understated the population. There are three *tahsils*—BENARES, GANGĀPUR, and CHANDAULI—each named from its head-quarters. BENARES CITY is the administrative capital, and RĀMNAGAR, the residence of the Mahārājā, is the only other town of importance. The following table gives the chief statistics of population in 1901:—

<i>Tahsil.</i>	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Benares . . . . .	464	2	989	557,541	1,202	— 3.9	41,757
Gangāpur . . . . .	118	...	280	86,703	735	— 3.6	2,895
Chandauli . . . . .	426	2	703	237,840	558	— 5.4	8,463
District total	1,008	4	1,972	882,084	875	— 4.3	53,115

The density of population is extremely high, being nearly double that of the United Provinces as a whole. Hindus form more than 89 per cent. of the total, and Musalmāns more than 10 per cent. The language in common use is Bihārī, which is spoken by 90 per cent. of the population, while Western Hindī (chiefly Hindustānī) is spoken by 7 per cent. Owing to its religious reputation, there are large numbers of persons speaking Bengali, Marāthī, and Gujarātī in Benares city.

The most numerous Hindu castes are: Brāhmans, 98,000; Chamārs (leather-workers and cultivators), 97,000; Kurmīs (agriculturists), 83,000; Ahīrs (agriculturists), 81,000; Rājputs, 53,000; and Koirīs (cultivators), 42,000. Among the castes found chiefly in the east of the United Provinces are the high-caste Bhuinhārs, who claim to be

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Gangāpur *tahsīl*) increased by only about 4 per cent. The principal change in this period was the replacement of sugar by rice and hemp (*san*), and there have been no striking alterations since. As a rule, few or no advances are made under the Loans Acts, but in 1896-7 Rs. 7,400 was lent.

The cattle of the District are very poor, and when better animals are required they are imported. The ponies are also inferior, and there is no peculiar breed of sheep or goats.

In 1903-4, 187 square miles were irrigated from wells and 59 from tanks. The tanks are chiefly natural depressions or *jhils*, and are used in October and November for rice cultivation, and later for the spring crops and for sugar-cane if the water is not exhausted. Wells can be made in most parts of the District, and are chiefly worked by bullocks. The rivers are hardly used at all for irrigation, as the lowlands in their beds do not require it, and the expense of raising water to a higher level would be prohibitive.

*Kankar*, or calcareous limestone, is the only mineral product, and is used for metalling roads and for making lime.

Excluding the city of Benares, there are few manufactures, and these are confined to the preparation of a few classes of articles for local use,

the weaving of coarse cotton cloth being the most important. The city is, however, celebrated for gold and silver jewellery, ornamental brass-work, embroidery, and silk-weaving. It also contains three ice factories, several printing presses, two chemical works, and two brick-making concerns.

There is little surplus agricultural produce in the District, and oil-seeds are perhaps the most important export. The manufactures of the city are, however, largely prepared for outside markets. The imports include piece-goods, salt, and metals. Benares city is the only trade centre, and absorbs a large part of the produce of the District, while it is the chief place for the distribution of imported goods. Railways have now taken the place of roads as trade-routes, and there is little traffic on the river except the carriage of stone and fuel from Mirzāpur.

The District is exceptionally well served by railways and roads. The main line of the East Indian Railway traverses the eastern portion, and at Mughal Sarai gives off a branch to Gayā in Bengal. Mughal Sarai is also the terminus of the Oudh and Rohilkhand Railway, which crosses the Ganges by a magnificent bridge, and then divides into two branches at Benares, and serves the western half of the District. Benares is the terminus of a branch of the Bengal and North-Western Railway which runs north. There are 577 miles of road, of which 127 are metalled. The latter are maintained by the Public Works department, but the cost of all but 51 miles is charged to Local funds. The main lines are: the grand trunk road, which traverses the south of the

Gangāpur *tahsīl*) increased by only about 4 per cent. The principal change in this period was the replacement of sugar by rice and hemp (*san*), and there have been no striking alterations since. As a rule, few or no advances are made under the Loans Acts, but in 1896-7 Rs. 7,400 was lent.

The cattle of the District are very poor, and when better animals are required they are imported. The ponies are also inferior, and there is no peculiar breed of sheep or goats.

In 1903-4, 187 square miles were irrigated from wells and 59 from tanks. The tanks are chiefly natural depressions or *jhils*, and are used in October and November for rice cultivation, and later for the spring crops and for sugar-cane if the water is not exhausted. Wells can be made in most parts of the District, and are chiefly worked by bullocks. The rivers are hardly used at all for irrigation, as the lowlands in their beds do not require it, and the expense of raising water to a higher level would be prohibitive.

*Kankar*, or calcareous limestone, is the only mineral product, and is used for metalling roads and for making lime.

Excluding the city of Benares, there are few manufactures, and these are confined to the preparation of a few classes of articles for local use,

the weaving of coarse cotton cloth being the most important. The city is, however, celebrated for gold and silver jewellery, ornamental brass-work, embroidery, and silk-weaving. It also contains three ice factories, several printing presses, two chemical works, and two brick-making concerns.

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the whole settlement was declared permanent. In 1818 the Districts of Ghāzipur (then including Balliā) and Jaunpur were formed, and in 1830 Benares was still further reduced by the formation of Mirzāpur District. The permanent settlement had not been based on a survey, and no detailed record-of-rights was prepared, engagements being often taken from a few representatives of large bodies of co-sharers. Between 1833 and 1841 a survey was made, field maps were prepared, and detailed records drawn up. A second formal revision was made between 1882 and 1886, since which time annual papers have been prepared as in the rest of the Provinces. The revenue assessed in 1795 on the two *tahsils* outside the Benares Domains was 7.9 lakhs, which by 1843 had risen to 8.2 lakhs, owing to the assessment of alluvial land and resumption of revenue-free grants. In 1903-4 the demand was 7.7 lakhs, and the demand in the Gangāpur *tahsil* was 1.2 lakhs.

Collections on account of land revenue and total revenue have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	8,95	9,02	9,04	8,98
Total revenue . . .	13,93	18,67	20,34	21,13

Benares is the only municipality in the District, but there are two towns administered under Act XX of 1856. Outside of these, local affairs are managed by the District board, which had an income of 1.1 lakhs in 1903-4, about one-third of which was derived from local rates. The expenditure on roads and buildings amounted to Rs. 60,000, out of a total expenditure of 1.2 lakhs.

The District Superintendent of police has a force of 4 inspectors, 121 subordinate officers, and 619 men, distributed in 22 police stations, besides 424 municipal and town police, and 1,460 rural and road police. There is a large Central jail with a daily average of 1,292 prisoners in 1903, while the District jail contained 411.

The District of Benares contains a higher proportion of persons able to read and write than any other in the United Provinces, except the Himālayan Districts. In 1901, 4.9 per cent. of the population (11.2 males and 0.8 females) were literate. The peculiar conditions of Benares city are largely responsible for this. The number of public institutions fell from 142 with 6,933 pupils in 1880-1 to 92 with 5,274 pupils in 1900-1. In 1903-4 there were 209 such institutions with 12,006 pupils, of whom 1,165 were girls, besides 130 private institutions with 3,471 pupils, including 879 girls. Three colleges and a collegiate school are maintained in BENARES CITY, but the majority of schools are of the primary class. Four schools and colleges are managed by Government, and 118 by the District and Municipal boards. The total

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Benares or Kāsī is at the present time one of the holiest places to the orthodox Hindu, and attracts great concourses of pilgrims, while many of its inhabitants are persons who have settled there in the hope of salvation through a death within its sacred precincts. The native town lies for four miles along a *kankar* ridge on the north-west bank of the Ganges, which forms a slightly curved reach below it, thus permitting the eye to take in at a single sweep the long line of picturesque *ghāts* surmounted by irregular buildings of various styles and proportions, the slender white minarets of Aurangzeb's mosque rising high above the general level. For a distance of from one to two miles from the bank the city consists of winding labyrinths and narrow alleys, lined by many-storeyed buildings used as shops or private houses, with innumerable shrines in every part, ranging from a shapeless fragment of stone smeared with vermilion to magnificent temples. Rājā Mān Singh of Jaipur is said to have presented 100,000 temples to the city in a single day.

The ordinary throng of a large city is swollen by the presence of strings of pilgrims being conducted from one to another of the more important shrines, and by the number of sacred bulls which wander about the streets. Along the *ghāts* strange figures of religious mendicants and ascetics are to be seen, some superintending the ablutions of the pilgrims in the sacred stream of the Ganges, while others practise devotions or various forms of austerity. Within the city there are many handsome houses substantially built and elaborately decorated; but the narrow, dirty, and crowded environments usually disappoint the visitor, after the high expectations aroused by the view from the river. Even the temples are generally small, and are not more than a few hundred years old. From a religious point of view, the Bisheshwar or Golden Temple, dedicated to Siva, is the most important. Siva in the form of Bisheshwar is regarded as the spiritual monarch of the city, and this is the holiest of all the holy places in the sacred city. It contains

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A municipality was constituted in 1868. During the ten years ending 1901 the income averaged 4·8 lakhs, and the expenditure 5·8 lakhs; the latter, however, included capital expenditure on water-supply and drainage. In 1903-4, excluding a loan of 1·5 lakhs, the income was 4·7 lakhs, the chief items being octroi (3 lakhs), water rate (Rs. 83,000), other taxes (Rs. 34,000), and rents (Rs. 30,000). The expenditure amounted to 6·4 lakhs, including repayment of loans and interest (1·1 lakhs), water-supply and drainage (capital, 2·2 lakhs, and maintenance, Rs. 72,000), conservancy (Rs. 70,000), roads and buildings (Rs. 28,000), public safety (Rs. 50,000), and administration and collection (Rs. 40,000). An excellent system of water-works was constructed between 1890 and 1892, which has cost upwards of 26 lakhs. In 1903-4 the daily consumption of filtered water amounted to over 16 gallons per head of population, and there were more than 5,000 house-connexions. Water is pumped from the Ganges and filtered before use. An elaborate drainage scheme is still under construction, which is estimated to cost 15 lakhs. It includes a system of sewers, with house-connexions.

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The Province is bounded on the north by Nepāl and Tibet, and by the mighty chain of the Himālayas; on the east by Assam and the continuation of the range of hills which divides Assam from Burma; on the south by the Bay of Bengal and Madras; and on the west by the United and the Central Provinces.

The whole Province forms a Lieutenant-Governorship with an area<sup>1</sup> of 196,408 square miles, of which 84,728 square miles are included in Bengal proper, 44,259 in Bihār, 24,306 in Orissa, and 43,115 in Chotā Nāgpur. These figures include an unsurveyed tract of swamp and jungle on the fringe of the delta, the extent of which is about 6,600 square miles. Of the total area, 157,796 square miles are British territory, while 38,612 square miles lie in the Native States attached to Bengal: namely, Cooch Behār, Sikkim, Hill Tippera\*, and the Tributary States of Orissa and Chotā Nāgpur.

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25,000,000. The five Hindī-speaking Native States of Jashpur, Surgujā, Udaipur, Koreā, and Chāng Bhakār were at the same time transferred to the Central Provinces; while the District of Sambalpur with the exception of two *zamindārīs*, and also the Oriyā-speaking States of Patnā, Kālāhandī or Karond, Sonpur, Bāmra, and Rairākhōl in the Central Provinces, were attached to Bengal. The result of these transfers of territory is that the Province as now constituted comprises an area of 148,592 square miles, with a population of 54,662,529 persons. In order to show the effect of this change in the constitution of the Province, footnotes have been added, wherever possible, giving statistics for the new area; and the States, Divisions, Districts, and towns transferred from Bengal have been indicated by asterisks.

<sup>1</sup> Of the total area of 148,592 square miles now included in Bengal, 35,576 square miles are in Bengal proper (including 5,700 square miles in the Sundarbans), 43,524 square miles are in Bihār, 41,789 in Orissa, and 27,703 in Chotā Nāgpur. Altogether, 115,819 square miles are British territory and 32,773 square miles are Native States.

<sup>2</sup> The word Vanga first appears as the name of a country in the *Āitareya Aranyaka* (2-1-1), where its inhabitants are represented as eaters of indiscriminate food, and as progenitors of many children.

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The whole Province forms a Lieutenant-Governorship with an area<sup>1</sup> of 196,408 square miles, of which 84,728 square miles are included in Bengal proper, 44,259 in Bihār, 24,306 in Orissa, and 43,115 in Chotā Nāgpur. These figures include an unsurveyed tract of swamp and jungle on the fringe of the delta, the extent of which is about 6,600 square miles. Of the total area, 157,796 square miles are British territory, while 38,612 square miles lie in the Native States attached to Bengal: namely, Cooch Behār, Sikkim, Hill Tippera\*, and the Tributary States of Orissa and Chotā Nāgpur.

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25,000,000. The five Hindī-speaking Native States of Jashpur, Surgujā, Udaipur, Koreā, and Chāng Bhakār were at the same time transferred to the Central Provinces; while the District of Sambalpur with the exception of two *zamindārīs*, and also the Oriyā-speaking States of Patnā, Kālāhandī or Karond, Sonpur, Bāmra, and Rairākhōl in the Central Provinces, were attached to Bengal. The result of these transfers of territory is that the Province as now constituted comprises an area of 148,592 square miles, with a population of 54,662,529 persons. In order to show the effect of this change in the constitution of the Province, footnotes have been added, wherever possible, giving statistics for the new area; and the States, Divisions, Districts, and towns transferred from Bengal have been indicated by asterisks.

<sup>1</sup> Of the total area of 148,592 square miles now included in Bengal, 35,576 square miles are in Bengal proper (including 5,700 square miles in the Sundarbans), 43,524 square miles are in Bihār, 41,789 in Orissa, and 27,703 in Chotā Nāgpur. Altogether, 115,819 square miles are British territory and 32,773 square miles are Native States.

<sup>2</sup> The word Vanga first appears as the name of a country in the *Āitareya Aranyaka* (2-1-1), where its inhabitants are represented as eaters of indiscriminate food, and as progenitors of many children.

same disturbances that resulted in the elevation of the Himālayas. The hollow thus formed has been filled in by the fluvial deposits of the Himālayan rivers ; but the gradual raising of the surface has been, to a great extent, discounted by fresh subsidences, which have been accompanied by upheavals elsewhere. However this may be, the uplands of Chotā Nāgpur date from a very ancient period, while the Himālayas were thrown up at a time which, from a geological point of view, is comparatively recent, and the alluvium in the greater part of Bengal proper has been deposited at a much later date than that in the Bihār plain west of Rājmahāl.

The sub-province of Bihār occupies the north-western quarter of Bengal. It is divided by the Ganges into two parts—north and south. North Bihār is a level plain falling very gradually from the foot of the Himālayas, and with a belt of fairly high land along the bank of the Ganges. Between these two extremes the general elevation is lower, and considerable areas are liable to damage by floods. The soil consists mainly of the older alluvium or *bāngar*, a yellowish clay, with frequent deposits of *kankar* ; but in many parts this has been cut away by the torrents that rush down from the Himālayas, and the lowland, through which these rivers have at one time or another found an exit to the Ganges, is composed of more recent deposits of sand and silt brought down by them when in flood. In South Bihār the effects of recent fluvial action are less marked, especially towards the east, where the outlying hills and undulations of the Chotā Nāgpur plateau trench more and more upon the Gangetic plain until, at Monghyr, they extend as far as the river itself, and offer an effectual opposition to the oscillations in its course which the more yielding alluvial soil is unable to prevent elsewhere. The Bihār of our administration contains two tracts which do not properly belong to it. The SANTĀL PARGANAS in its physical and ethnic features is an integral part of Chotā Nāgpur, while MĀLDA\* and the eastern part of PURNEA belong to Bengal proper.

The latter sub-province naturally subdivides itself into four distinct parts. West Bengal, or the part west of the Bhāgīrathi, lies outside the true delta. The eastern portion of this tract is low and of alluvial formation ; but farther west laterite begins to predominate, and the surface rises and becomes more and more undulating and rocky, until at last it merges in the uplands of Chotā Nāgpur. Central Bengal, or the part lying south of the Padmā, between the Bhāgīrathi on the west and the Madhumatī on the east, was formerly the Ganges delta ; but it has gradually been raised above flood-level, and the great rivers which formerly flowed through it, depositing their fertilizing silt, yielding an ample supply of wholesome drinking-water, and draining it, have shrunk to insignificance. Their mouths have silted up and their banks are

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and Raidāk rivers, terminating in the SINCHULĀ hills which form the boundary between Jalpaiguri District\* and Bhutān. The sub-Himālayan zone is represented by the Someswar hills (2,270 feet), which form the boundary between Champāran District and Nepāl.

The Chotā Nāgpur plateau is contiguous to the Vindhyan system and attains an elevation of 2,000 feet. There are in reality three separate plateaux divided by belts of rugged hill and ravine; and a confused mass of hills fringes the plateaux, extending in the RĀJMAHĀL HILLS and at Monghyr north-east to the Ganges, and southwards over the Orissa Tributary States, while outlying spurs project far into the plains of South Bihār and West Bengal. PARASNĀTH (4,480 feet) in Hazāribāgh District is the loftiest of these spurs, and the SARANDA hills in Singhbhūm rise to 3,500 feet.

On the south-eastern frontier a succession of low ranges running north and south covers the east of the Chittagong Division\* and Hill Tippera\*. The SĪTĀKUND\* hill rises to 1,155 feet; but the ranges in the Chittagong Hill Tracts\* attain a greater altitude, the highest peaks being Keokrā dang (4,034 feet) and Pyramid hill (3,017 feet).

The most distinctive feature of the Province is its network of rivers—the Ganges and the Brahmaputra, with their affluents and distributaries. These rivers are of use in many ways. They furnish an admirable and cheap means of transport; they contain an inexhaustible supply of fish; and they bring down vast quantities of fertilizing silt, which they distribute over the surface of the delta. The Ganges, which enters on the western frontier, flows almost due east, with numerous oscillations, as far as Rājmahāl, where it escapes from the restraining influence of the hard rocks of the Chotā Nāgpur formation and enters the loose alluvium of Bengal proper. Until some 400 years ago, its subsequent course was due south, down the channel of the BHĀGĪRATHĪ. By degrees this channel silted up and became unequal to its task, and the main stream of the Ganges was thus obliged to seek another outlet. In this way the ICHĀMATĪ, the JALANGĪ, and the MĀTĀBHĀNGA became in turn the main stream. The river tended ever eastwards, and at last, aided perhaps by one of those periodic subsidences of the unstable surface of the country to which reference has already been made, it broke eastwards, right across the old drainage channels, until it was met and stopped by the Brahmaputra. The river, below the point where the Bhāgīrathī leaves it, is known as the PADMĀ.

Having its source at no great distance from that of the Ganges, but on the other side of the Himālayas, the Brahmaputra flows eastwards through Tibet, where it is known as the Tsan-po, until it reaches a point due north of the eastern extremity of Assam, when it takes a southerly course and, threading its way through the Eastern Himālayas, emerges in the plains of Assam. It then turns westwards and, after traversing

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In their upper reaches the rivers have a rapid flow and carry away the soil; but when they enter the level flats of Bengal proper, their speed is reduced, and their torpid current is no longer able to support the solid matter hitherto held in suspension. They accordingly deposit it in their beds and on their banks, which are thus raised above the level of the surrounding country, until at last the river breaks through to the adjacent lowland and makes for itself a new bed, where it repeats the process. Great marshes or *hīls* are often found within the enclosures thus formed by the high banks of rivers. These are generally connected with the outside rivers by *khāls* or drainage channels; but, owing to the tendency of all watercourses to silt up, they remain open only so long as the difference of level between the water in the basin and that outside is sufficiently great to maintain a flow which gives an efficient scour. The natural tendency of these swamps is to fill up; in the rainy season the rivers drain into them and deposit their silt, and decayed vegetable matter also gradually accumulates. In this way, but for the vagaries of the rivers and fresh subsidences of the surface, the irregularities in elevation would in course of time disappear. These marshes are met with all over Bengal proper; but they are especially numerous in the south of FARĪDPUR\* and the west and north-west of BACKERGUNGE\*, where the whole country is a succession of basins, full of water in the rains, but partially or wholly dry in the winter months. The largest of these depressions is the CHALAN BİL\*, lying partly in Rājshāhi\* and partly in Pābna\*, which has a water area varying from about 20 square miles in the dry season to 150 in the rains. The average depth of water during the dry season is about 3 feet; a tortuous navigable

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As has already been stated, the greater part of the plains of Bengal is covered by alluvium. Little is known of the hills in the Chittagong Hill Tracts\* and Hill Tippera\*, except that they are composed of Upper Tertiary rocks, and geological interest is confined to the Chotā Nāgpur plateau and to the portion of the Himālayas contained in Darjeeling and Sikkim.

Gneissic rocks form the nucleus of the Chotā Nāgpur plateau, and are fringed on all sides by transition rocks, and freely interbedded with micaceous, siliceous, and hornblendic schists. The transition or sub-metamorphic rocks form groups of isolated hills in South Bihār, known as the Rājgir, Sheikhpurā, Kharakpur, and Gīdhaur hills; and similar transition rocks are found in parts of Mānbhūm, Singhbhūm, and Rānchī Districts. The transition rocks carry metalliferous lodes of gold, silver, copper, and lead, but so far none of these have proved remunerative.

Sandstones, shales, and limestones belonging to the Sasarām Vindhyan system occur near Rohtāsgarh in Shāhābād District. The Gondwāna system contains coal-bearing strata, and is represented in the RĀJMAHĀL HILLS, the Dāmodar valley, in several of the Chotā Nāgpur Districts, and in Orissa. At the base of this system lies the Tālcher group of shale and sandstone, and above it the Karharbārī sandstones, grits, and conglomerates, with seams of coal. This is superposed by the Dāmodar series, which comprises in ascending order the Barākar group, ironstone shales, and the Rāniganj beds. The Barākars consist of conglomerates, sandstones, shales, and coal; and above them, in the Rāniganj and a few other coal-fields of the Dāmodar valley, there is found a great thickness of black or grey shales, with bands and nodules of clay ironstone. The Rāniganj beds comprise coarse and fine sandstones, with shales and coal-seams.

Laterite (a porous argillaceous rock much impregnated with iron peroxide) is well developed on the west coast, and is traced northward from Orissa, through Midnapore, Burdwān, and Birbhūm, to the flanks of the Rājmahāl Hills, where in places it is as much as 200 feet thick. Gneiss of the well-foliated type, frequently passing into mica schist, constitutes the greater portion of the Darjeeling Himālayas; but sub-

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Although Bengal is situated almost entirely outside the tropical zone, its climate for about two-thirds of the year, i.e. from the middle of March to the end of October, is of the kind usually characterized as tropical; it has a high temperature and humidity, and a dry and a wet season. During the other months the temperature is much lower, the humidity is slight or moderate, and the rainfall is generally scanty. The mean temperature during the cold-season months is about  $64^{\circ}$  and during the hot season about  $83^{\circ}$ . About the beginning of March, as the sun gains a higher altitude and the days grow longer, the temperature increases rapidly. The process is aided, in the greater part of Bengal proper and Orissa, by moisture-laden southerly winds from the Bay of Bengal, which give a fairly copious rainfall when weather is disturbed<sup>1</sup>, while in Bihār and part of North Bengal hot and dry westerly winds are prevalent in the daytime, but die away at night. From about the middle of May the south-west wind-current steadily strengthens, and, being diverted northwards by the mountain range on the western side of Burma, causes increasing rainfall in East Bengal. By the middle of June, in normal years, the monsoon has attained its full strength, and, flowing northwards, is checked and turned westwards by the Himālayan range. The moist current in its northward course is the cause of heavy rainfall near the coast and in the eastern Districts. Farther west the rainfall is more intermittent, and is due more to the cyclonic disturbances which develop at short intervals of two or three weeks in the north-west angle of the Bay and in Lower Bengal. These invariably move westwards, and in passing over the western Districts cause continuous and occasionally very heavy rainfall for several days at a time. From the beginning of September the south-west monsoon begins to fall off in strength. Cloud and rainfall are more intermittent, and are generally due to cyclonic storms, which begin to move more to the north and north-east than to the west. Temperature increases owing to the longer intervals of bright sunshine. Before the end of October

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of a heavy downpour is to cause the rivers to rise and overflow their banks, especially the rivers flowing from the Himālayas, which collect the rain-water more rapidly than do those in the plains. The most disastrous flood of this nature on record occurred in 1787, when the Tista suddenly burst its banks and spread itself over the whole District of RANGPUR\*. It is estimated that the direct loss of life due to drowning, and the indirect mortality on account of famine and disease, amounted to one-sixth of the entire District population. In the case of non-Himālayan rivers, the liability to damage is greatest where embankments have been thrown up to hold the river to its course. The effect of these embankments is that the water, which is flowing at a higher level than the surrounding country, suddenly rushes over them instead of rising gradually, as it would do if there was no embankment. Consequently, when a breach occurs, the water pours over the lower land beyond and does immense damage. In 1885, and again in 1890, when the great Lalitākuri embankment of the Bhāgīrathi gave way, the flood-water swept right across MURSHIDĀBĀD and NADIĀ Districts for a distance of more than 50 miles.

The Province suffers even more from cyclones, especially on the sea-coast of East Bengal, where they often cause an inundation of salt water. The most striking features in these cyclones are the great barometric depression in the centre and the magnitude of the storm area. These two causes produce a large accumulation of water at and near the centre, which progresses with the storm and gives rise to a destructive storm-wave when the centre reaches a gradually shelving coast. This conjunction of adverse circumstances occurs more or less regularly at intervals of ten or twelve years. The worst of the recent calamities of this nature was in 1876, when a great part of BACKERGUNGE\* and the adjoining Districts was submerged to a depth of from 10 to 45 feet. Nearly 74,000 persons were drowned in Backergunge\* alone, and the cholera epidemic which followed carried off close on 50,000 more. On October 24, 1897, CHITTAGONG DISTRICT\* was devastated by a similar but more local catastrophe; 14,000 persons were drowned and nearly three times that number died of the diseases that followed. Tidal waves have more than once caused great damage to the shipping in the HOOGHLY; and although Calcutta itself is so far from the sea, it is by no means certain that it is beyond the reach of a bore of exceptional height and momentum. Great damage is occasionally caused by cyclones on the sea-coast of Orissa, and in 1885 a considerable area in Cuttack and Balasore was inundated and large numbers of human beings and cattle were drowned.

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run, as far as Bihār and Chotā Nāgpur, by tribes speaking languages of the family known as Mon-Anam or Mon-Khmer, which is still extant in Pegu, Cambodia, and Cochin China. These tribes probably came from the north-east by way of the Pātkai pass and the valley of the Brahmaputra. The only dialect of this family which survives in Assam is the Khāsi; in Bengal not a single representative is left, but indications of its former existence are perhaps disclosed by the Mundā family of languages<sup>1</sup>. These invaders from the north-east were followed by fresh hordes from the same direction, whose speech was of the type known as Tibeto-Burman, of which Tibetan and Burmese represent the two standards to which the other and ruder dialects tend to conform, and which is believed to have had its origin in Eastern Tibet or in adjacent territory now Chinese. The earliest of these later incomers were probably the ancestors of the Pods of Central and the Chandāls of East Bengal, who have long since abandoned their characteristic dialects, while the latest were the Kochs, Mechs, and Gāros, many of whom still retain their tribal forms of speech. The Aryan invasion from the north-west, which took place while the incursions of Mongoloid tribes from the north-east were still in progress, was the last notable movement so far as this Province is concerned. Bihār was the seat of rule of Aryan princes, but in Bengal proper the stream of immigration was comparatively thin and attenuated. As the Aryan invasion spread, its character changed, and arms gave way to arts. Aryan priests, adventurers, merchants, and artificers found their way over and beyond Bengal, and by their superior intelligence and culture gradually imposed their religion and language on people whom they had never conquered, and sometimes even snatched the crown from the indigenous ruling families.

The province of Bihār is known to us from very early times. The ancient kingdom of MAGADHA comprised the country now included in the Districts of Patna, Gayā, and Shāhābād. Its capital was at Rājā-griha (RĀJGIR), some 30 miles north-east of Gayā. North of the Ganges was Videha or MITHILĀ, which was very early a great seat of Sanskrit learning, and included the modern Districts of Darbhāṅgā, Champāran, and North Muzaffarpur; the south of the latter District constituted the small kingdom of VAISALĪ. To the east lay ANGĀ, including Monghyr, Bhāgalpur, and Purnea, as far as the Mahānandā river. There are constant references to these countries in the Mahābhārata. Magadha is even mentioned under the name of Kikotā in the Rig Veda, and Mithilā in the *Satyapatha Brāhmaṇa*. It was in Magadha that Buddha developed his religion, and that Mahāvīra founded the cognate creed of the Jains. Soon after Buddha's death,

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kingdom stretched westwards as far as the Karatoyā river. It was ruled by a succession of princes of Mongoloid stock, and was still flourishing when visited by Hiuen Tsiang in the seventh century. South-west of Prāgjyotisha, between the Karatoyā and the Mahānandā, lay PUNDRA or Paundravardhana, the country of the Pods, which, according to Cunningham, has given its name to the modern Pābna\* ; its capital may have been at MAHĀSTHĀN\* on the right bank of the old Karatoyā river, or at Pandua\*, near Mālda\*. This kingdom was in existence in the third century B.C., and Asoka's brother found shelter there in the guise of a Buddhist monk. It was still flourishing when Hiuen Tsiang travelled in India ; and it is mentioned as a powerful kingdom in the eighth century A.D., and as a place of pilgrimage in the eleventh century.

East of the Bhāgīrathī and south of Pundra lay BANGA or Samatata. Its people are described in the *Raghubansa* as possessing many boats, and they are clearly the ancestors of the Chandāls, who at the present day inhabit this part of the country. On the west of the Bhāgīrathī lay KARNA SUVARNA (Burdwān, Bānkurā, Murshidābād, and Hooghly), whose king, Sasānka or Narendra, the last of the Guptas, was a fanatical worshipper of Siva, and invaded Magadha and cut down the sacred *bodhi* tree early in the seventh century. The capital was probably near RĀNGĀMĀTĪ, in Murshidābād District. Lastly, there was the kingdom of TĀMRALĪPTA, or Suhmā, comprising what now constitutes the Districts of Midnapore and Howrah. The rulers of this country seem to have been Kaibarttas.

During the ninth century, the Pāl dynasty rose to power in the country formerly known as Anga, and gradually extended their sway over the whole of Bihār and North Bengal. Traces of their rule are very common in the south of Dinājpur\*, where the memory of Mahipāl, in particular, is preserved both in the traditions of the people and in numerous names of places. Like the kings of Pundra, they were Buddhists, but they were tolerant towards Hinduism. They were driven from Bengal proper, about the middle of the eleventh century, by a king named Vijaya Sen of the Sen family, but they continued to rule for some time longer in Bihār. The Sens rose to power in East and deltaic Bengal towards the end of the tenth century, and eventually included within their dominions the whole of Bengal proper from the Mahānandā and the Bhāgīrathī on the west to the Karatoyā and the old Brahmaputra on the east. The Sens were Hindus, and during their rule Buddhism was actively discouraged. The best remembered king of this dynasty is Ballāl Sen, who reorganized the caste system and introduced Kulinism among the Brāhmans, Baidyas, and Kāyasths. To him is attributed the division of Bengal into four parts : namely, RĀRH, west of the Bhāgīrathī, corresponding roughly to Karna Suvarna ;

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Mughis-ud-dīn Tughril, the sixteenth governor, who had originally been a favourite slave of the emperor Balban, seeing that Balban was preoccupied with the advance of the Mongols from the west, rebelled and defeated in turn the imperial armies that were sent against him. Balban himself then took the field (in 1282), and having surprised and slain Tughril and put a great number of his followers to the sword, installed his son, Nāsir-ud-dīn Bughrā, as governor. In 1338 Fakhr-ud-dīn Mubārak revolted against Muhammad bin Tughlak, and declared himself independent.

Eight years before this date South Bihār had been separated from Bengal and annexed to Delhi. North Bihār apparently belonged to Bengal for some time longer, as the Bengal king, Hājī Shams-ud-dīn Ilyās, is reputed to have been the founder of Hājīpur. In 1397 the whole of Bihār became part of the kingdom of Jaunpur; but a century later it was again taken possession of by the emperors of Delhi, who continued to hold it, except for a short time when the Bengal king, Alā-ud-dīn Husain, and his son, Nāsir-ud-dīn Nusrat, obtained temporary possession of the country north of the Ganges. Under the Mughals the capital of the country was the town of Bihār in the south of the Patna District, and from this town the whole province took its name. A considerable part of North Bihār was under the rule of a line of Brāhman kings, who were generally tributary to the Pathāns, from the middle of the fourteenth to the middle of the sixteenth century. Another Hindu dynasty, possibly connected with them, ruled during the fifteenth century in Champāran and Gorakhpur.

From 1338 till 1539, when it fell into the hands of Sher Shāh, Bengal was ruled by various lines of independent kings, mostly of Pathān or Turkī origin. Some, however, were Abyssinian eunuchs, and one, Rājā Kāns or Ganesh of Dinājpur\*, was a Hindu; the latter's son, who succeeded him, became a convert to Islām. The exact area of their dominions varied. Sometimes they were contracted by the encroachments of the kings of Kamātāpur, Arakan, and Tippera\*, while at others they were extended, notably by Alā-ud-dīn Husain, who in 1498 conquered the kingdom of Kamātāpur in the north-east and overran Orissa and Bihār.

After Bābar had overthrown the Afghān dynasty at Delhi, he turned his arms against the Afghān rulers of Bihār. These were twice defeated in 1528 and 1529, and sought refuge with their compatriots in Bengal, who in their turn were worsted in a battle on the banks of the

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When Aurangzeb died, the governor of Bengal was Murshid Kuli Khān, a Brāhman convert to Islām. He possessed great administrative ability; and, profiting by the dissensions at Delhi, he succeeded in making himself practically independent. From that time forward the supremacy of the Mughal emperors was little more than nominal.

In North Bengal various Mongoloid tribes rose in turn to power. When Alā-ud-dīn Husain overran the country at the end of the fifteenth century, the ruling monarch was Nīlāmbar, the third of a line of Khen chieftains. Shortly afterwards Biswa Singh, the progenitor of the Koch kings, founded a new dynasty, whose rule extended from the Karatoyā to Central Assam; and it was not until 1661 that the country as far as Goālpāra was permanently acquired by Mīr Jumla. Previous to the seventeenth century the Chittagong Division\* was usually in the hands of the Tipperas or of the Maghs, and it was only after the transfer of the capital to Dacca\* that this tract was gradually annexed.

Orissa (including Midnapore), which had been wrested from the Hindu kings by Kāla Pāhār, remained in the possession of the Afghāns until 1592, when Mān Singh annexed it. It was placed under separate governors, but Midnapore and Balasore were subsequently transferred to Bengal. In 1751 Alī Vardī Khān ceded the province to the Bhonslas of Nāgpur, in whose possession it remained until its conquest by the British in 1803. The Marāthās made no attempt to establish any civil administration, and their rule was confined to a periodic harrying of the country by their cavalry, who extorted whatever they could from the people.

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Chandradwīp in the south-east of the modern District of Backergunge\*, and Isa Khān, of SONĀRGAON\* in Dacca\*, who was 'chief of all the other kings' and powerful enough to make war on the Koch kings of Kāmarūpa.

The following is a chronological table of the Muhammadan rulers of Bengal :—

*Early Muhammadan Governors of Bengal*

	A. D.		A. D.
Muhammad-i-Bakhtiyār Khilji . . . . .	1202	Nāsir-ud-dīn Bughrā (son of Bal-ban) . . . . .	1282
Izz-ud-dīn Muhammad Shīrān . . . . .	1205	Rukn-ud-dīn Kaikaus (son of Bughrā) . . . . .	1291
Alā-ud-dīn Mardān . . . . .	1208	Shams-ud-dīn Fīroz (son of Bughrā) . . . . .	1302
Ghiyās-ud-dīn Iwaz . . . . .	1211	Shahāb-ud-dīn Bughrā (son of Bughrā, W. Bengal) . . . . .	1318
Nāsir-ud-dīn Mahmūd, son of emperor Altamsh . . . . .	1226	Ghiyās-ud-dīn Bahādur (son of Fīroz, E. Bengal) . . . . .	1310
Alā-ud-dīn Jānī . . . . .	1229	Ghiyās-ud-dīn Bahādur (all Bengal) . . . . .	1319
Saif-ud-dīn Aibak . . . . .	1229	Nāsir-ud-dīn (son of Fīroz, Lakhnauti) . . . . .	1323-5
Izz-ud-dīn Tughril Tughān . . . . .	1233	Bahādur restored with Bahrām (E. Bengal) . . . . .	1324-30
Kamar-ud-dīn Tamar . . . . .	1244	Bahrām . . . . .	1330-8
Ikhtiyār-ud-dīn Yūzbak . . . . .	1246	Kadar Khān (Lakhnauti) . . . . .	1325-39
Jalāl-ud-dīn Masūd . . . . .	1258	Izz-ud-dīn (Sātgaon) . . . . .	1323-39
Izz-ud-dīn Balban (afterwards emperor) . . . . .	1258		
Muhammad Arslān Tātār Khān . . . . .	1260		
Sher Khān . . . . .			
Amin Khān . . . . .			
Mughīs-ud-dīn Tughril . . . . .	1277		

*Independent Muhammadan Kings of Bengal*

	A. D.		A. D.
Fakhr-ud-dīn Mubārak (E. Bengal) . . . . .	1338-49	Jalāl-ud-dīn Fateh . . . . .	1481
Ikhtiyār-ud-dīn Ghāzī (E. Bengal) . . . . .	1349-52	Shāhzāda Bārbak Habshī . . . . .	1486
Alā-ud-dīn Alī (W. Bengal) . . . . .	1339-45	Saif-ud-dīn Fīroz . . . . .	1486
Shams-ud-dīn Ilyās (in Gaur) . . . . .	1345	Nāsir-ud-dīn Mahmūd . . . . .	1489
Sikandar I . . . . .	1358	Shams-ud-dīn Muzaffar . . . . .	1490
Ghiyās-ud-dīn Azam (in the East) . . . . .	1389	Alā-ud-dīn Husain . . . . .	1493
Saif-ud-dīn Hamza . . . . .	1396	Nāsir-ud-dīn Nusrat . . . . .	1523
Shams-ud-dīn . . . . .	1406	Alā-ud-dīn Fīroz . . . . .	1532
Shahāb-ud-dīn Bāyazīd Shāh with Rājā Kāns (Ganesh) . . . . .	1409	Ghiyās-ud-dīn Mahmūd Shāh (the last substantial King of Bengal) . . . . .	1532
Jalāl-ud-dīn Muhammad . . . . .	1414	<i>Conquest by Humāyūn</i> . . . . .	1537
Shams-ud-dīn Ahmad . . . . .	1431	Sher Shāh (Sultān of Delhi) . . . . .	1539
Nāsir-ud-dīn Mahmūd . . . . .	1442	Islām Shāh ditto . . . . .	1545
Rukn-ud-dīn Bārbak . . . . .	1459	Shams-ud-dīn Muhammad Sūr . . . . .	1552
Shams-ud-dīn Yūsuf . . . . .	1474	Bahādur . . . . .	1554
Sikandar II . . . . .	1481	Ghiyās-ud-dīn Jalāl . . . . .	1560
		Sulaimān Kararānī . . . . .	1563
		Bāyazīd . . . . .	1572
		Daud . . . . .	1573

Chandradwīp in the south-east of the modern District of Backergunge\*, and Isa Khān, of SONĀRGAON\* in Dacca\*, who was 'chief of all the other kings' and powerful enough to make war on the Koch kings of Kāmarūpa.

The following is a chronological table of the Muhammadan rulers of Bengal :—

*Early Muhammadan Governors of Bengal*

	A. D.		A. D.
Muhammad-i-Bakhtiyār Khilji . . . . .	1202	Nāsir-ud-dīn Bughrā (son of Bal-ban) . . . . .	1282
Izz-ud-dīn Muhammad Shīrān . . . . .	1205	Rukn-ud-dīn Kaikaus (son of Bughrā) . . . . .	1291
Alā-ud-dīn Mardān . . . . .	1208	Shams-ud-dīn Fīroz (son of Bughrā) . . . . .	1302
Ghiyās-ud-dīn Iwaz . . . . .	1211	Shahāb-ud-dīn Bughrā (son of Bughrā, W. Bengal) . . . . .	1318
Nāsir-ud-dīn Mahmūd, son of emperor Altamsh . . . . .	1226	Ghiyās-ud-dīn Bahādur (son of Fīroz, E. Bengal) . . . . .	1310
Alā-ud-dīn Jānī . . . . .	1229	Ghiyās-ud-dīn Bahādur (all Bengal) . . . . .	1319
Saif-ud-dīn Aibak . . . . .	1229	Nāsir-ud-dīn (son of Fīroz, Lakhnauti) . . . . .	1323-5
Izz-ud-dīn Tughril Tughān . . . . .	1233	Bahādur restored with Bahrām (E. Bengal) . . . . .	1324-30
Kamar-ud-dīn Tamar . . . . .	1244	Bahrām . . . . .	1330-8
Ikhtiyār-ud-dīn Yūzbak . . . . .	1246	Kadar Khān (Lakhnauti) . . . . .	1325-39
Jalāl-ud-dīn Masūd . . . . .	1258	Izz-ud-dīn (Sātgaon) . . . . .	1323-39
Izz-ud-dīn Balban (afterwards emperor) . . . . .	1258		
Muhammad Arslān Tātār Khān . . . . .	1260		
Sher Khān . . . . .			
Amin Khān . . . . .			
Mughīs-ud-dīn Tughril . . . . .	1277		

*Independent Muhammadan Kings of Bengal*

	A. D.		A. D.
Fakhr-ud-dīn Mubārak (E. Bengal) . . . . .	1338-49	Jalāl-ud-dīn Fateh . . . . .	1481
Ikhtiyār-ud-dīn Ghāzī (E. Bengal) . . . . .	1349-52	Shāhzāda Bārbak Habshī . . . . .	1486
Alā-ud-dīn Alī (W. Bengal) . . . . .	1339-45	Saif-ud-dīn Fīroz . . . . .	1486
Shams-ud-dīn Ilyās (in Gaur) . . . . .	1345	Nāsir-ud-dīn Mahmūd . . . . .	1489
Sikandar I . . . . .	1358	Shams-ud-dīn Muzaffar . . . . .	1490
Ghiyās-ud-dīn Azam (in the East) . . . . .	1389	Alā-ud-dīn Husain . . . . .	1493
Saif-ud-dīn Hamza . . . . .	1396	Nāsir-ud-dīn Nusrat . . . . .	1523
Shams-ud-dīn . . . . .	1406	Alā-ud-dīn Fīroz . . . . .	1532
Shahāb-ud-dīn Bāyazīd Shāh with Rājā Kāns (Ganesh) . . . . .	1409	Ghiyās-ud-dīn Mahmūd Shāh (the last substantial King of Bengal) . . . . .	1532
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of Calcutta, Sūtānūtī, and Gobindpur, subject to a revenue of Rs. 1,195; and in 1717 the purchase was sanctioned of thirty-eight more villages, paying a revenue of Rs. 8,121.

In June, 1756, Sirāj-ud-daula, the Nawāb of Bengal, finding that the English, in fear of an attack by the French, who had established themselves at CHANDERNAGORE in 1688, were strengthening the fortifications of Calcutta without his permission, marched against the place and took it. It was then that occurred the massacre of the Black Hole. The European prisoners, 146 in number, were confined in a small room, only 18 feet by 14 feet, and next morning all but 23 were found to have died of suffocation. A force was immediately dispatched from Madras under Clive, who advanced in 1757 towards Murshidābād. The Nawāb, with a large army, met him at PLASSEY, but was utterly defeated; Mīr Jafar was appointed Nawāb, but was soon afterwards ousted in favour of his son-in-law, Mīr Kāsim. The latter, exasperated by the exactions of the servants of the Company and their interference with the transit duties, engaged in hostilities, but was twice defeated. He fled to Oudh, after causing a number of English prisoners at Patna to be put to death. The Nawāb of Oudh espoused his cause; but the combined armies were defeated by Major Munro at BUXAR in 1764, and the Diwānī or civil authority over Bengal, Bihār, and Orissa was conferred in perpetuity on the East India Company by the emperor Shāh Alam<sup>1</sup>. The result was that the centre of British power was transferred from Madras to Calcutta, and that from 1774 to 1854 the Governorship of Bengal was merged in the Governor-Generalship of the Company's territories in India. The French Settlement at Chander-nagore was captured at the same time, but was subsequently restored, and the place is still a French possession administered in subordination to the French governor of Pondicherry.

In 1765 was inaugurated Clive's celebrated 'dual system,' by which it was thought that the Company would get all the benefit from its new possessions, without the trouble and responsibility involved in their actual administration. Mīr Jafar was reinstated as Nawāb; but he was required to execute an agreement by which the Company received the revenues and undertook the military defence of the country, while he carried on the civil administration in return for a fixed stipend. The revenue was collected by Naibs or Deputy-Nawābs. This dual government was found most unsatisfactory; the people were subjected to great oppression, while the collections rapidly declined. In 1769-70 there was a terrible famine in which a third of the population is said to have perished, and which is believed to have been aggravated by the misgovernment of the agents of the Nawāb and the ignorance of local

<sup>1</sup> Orissa was at the time in the possession of the Marāthās, and it was not until 1803 that it was conquered and annexed by Lord Wellesley.

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until 1854, when the Governor-General was relieved of the direct administration of Bengal by the appointment of a permanent Lieutenant-Governor. The change was much needed, as the Governor-General being frequently absent, and his Deputy-Governor, who was usually the senior ordinary Member of Council for the time being, constantly changing, the element of personal continuity at the head of the Administration was sadly lacking. The names of the successive Lieutenant-Governors of Bengal are noted below<sup>1</sup>:—

Sir Frederick Halliday . . . . .	1854	Sir Rivers Thompson . . . . .	1882
Sir John Peter Grant . . . . .	1859	Sir Steuart Bayley . . . . .	1887
Sir Cecil Beadon . . . . .	1862	Sir Charles Elliot . . . . .	1890
Sir William Grey . . . . .	1867	Sir Alexander Mackenzie . . . . .	1895
Sir George Campbell . . . . .	1871	Sir John Woodburn . . . . .	1898
Sir Richard Temple . . . . .	1874	Sir James Bourdillon . . . . .	1902
Sir Ashley Eden . . . . .	1877	Sir Andrew Fraser . . . . .	1903

The events of the Sepoy Revolt took place chiefly in Upper India, and the rising in Bengal was comparatively unimportant. But the story of the greased cartridges had its origin at Barrackpore, and both there and at Berhampore, Dinapore, and Dacca\*, the sepoys mutinied. They were, however, quickly suppressed; and it was only in Bihār that events for a time took a serious turn, especially in Shāhābād, where the defence of the billiard-room at Arrah, by a handful of Civilians and Sikhs, against the onslaught of the sepoy mutineers from Dinapore and the levies of a local Rājput *zamīndār*, forms one of the most splendid pieces of gallantry in the history of the British arms.

In 1864 repeated raids by the Bhutānese, and the barbarous outrages committed on the British Envoy sent to negotiate with the Bhutān government, led to a campaign in which the Bhutānese were worsted and the British troops took possession of the Duārs, i.e. the passes into the hills and the adjoining lowlands; and in 1865 a treaty was concluded by which those territories were ceded to the British Government in return for a fixed annual payment. In 1874 the Districts constituting the Province of Assam were separated from Bengal and placed under a Chief Commissioner. In 1888 the Tibetans having advanced into Sikkim, an expedition was sent against them. They were defeated with ease, the campaign ending with their complete expulsion from Sikkim, and that State was brought into closer relations with the British Government by the appointment of a resident Political officer. This was followed by the execution of a convention which provided for the improvement of the trade relation with Tibet; but the results in this respect were disappointing, and in 1904 a British Mission was sent into Tibet and penetrated as far as Lhāsa, where a new convention was executed by the Tibetan authorities.

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striking feature of which is the curved battlement, imitating the peculiar shape of a Bengali hut. GAUR and PANDUA, in the District of Mālda\*, the ancient capitals of those dynasties, still contain the best specimens of this type, such as the Bāraduāri of Rāmkel, the Dākhl Darwāza, the Tāntipāra, Sonā, and Lotan mosques, the Kadam Rasūl, and the Fīroz Minār. The Adīna mosque, at Pandua, was built by Sultān Sikandar Shāh in 1368. It is constructed almost entirely from the spoils of Hindu temples, which must have abounded in this neighbourhood<sup>1</sup>. Many of these are now being repaired. Among other buildings of this period may be mentioned the curious Shāt Gumbaz, a mosque with seventy-seven domes, near BĀGHERHĀT in the District of Khulnā, built by Khān Jahān, whose tomb is close to the mosque. At a second PANDUA, in Hooghly District, there is a large mosque and *minār* of about the year 1300, and close to it, at TRIBENĪ, is the *dargāh* of Zafar Khān Ghāzī and a mosque of the same period.

The short reign of Sher Shāh is still borne witness to by one of the finest specimens of Muhammadan sepulchral architecture, his own tomb at Sasarām, which place he originally held as his *jāgīr*. His father's tomb in the same town, and the tomb of Bakhtyār Khān, near Chainpur, in the Bhabuā subdivision of Shāhābād District, are similar but less imposing. The small hill fort of SHERGARH, 26 miles south-west of Sasarām, dates from Sher Shāh's time, but at ROHTĀSGARH itself little remains of his period; the palace at this place is attributed to Mān Singh, Akbar's famous general. The *dargāh* of Shāh Daulat at MANER, near Dinapore, completed in 1616, is a fine specimen of architecture of the Mughal period; it is covered with most exquisite sandstone carvings. There are numerous other tombs and mosques of the same period at Patna, Bihār, Rājmahāl, Murshidābād, Monghyr, Dacca\*, &c.; but they are of little interest compared with similar buildings in other parts of India.

The distribution of the population<sup>2</sup>, as disclosed by the Census of 1901, is shown in Tables II and IIA at the end of this article (pp. 343-5).

**Population.** The total population of the Province, including Native

States, is 78,493,410, of whom 39,278,186 are males and 39,215,224 females. Of the total number, 74,744,866 are in British territory and 3,748,544 in Native States.

In the Province<sup>3</sup> as a whole there are 400 persons to the square mile, but the density varies remarkably in different parts. It is greatest

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while in the newer towns the industries are carried on by foreign capital, and even the employ es come from other parts of the country. The mills of Howrah and the coal-mines of ASANSOL are alike worked, with British capital, by coolies from Bih r and the United Provinces, and the shopkeepers, who are enriched by the trade they bring, are also for the most part foreigners.

The population of Calcutta, as limited by the jurisdiction of the municipal corporation, is 848,000; but to this should be added that of its suburbs (101,000), and also of Howrah (158,000), which lies on the opposite bank of the Hooghly and is as much a part of Calcutta as Southwark is of London. With these additions, the number of inhabitants rises to 1,107,000, which is greater than that of any European city except London, Constantinople, Paris, and Berlin. Next to Calcutta Howrah is now the largest town in Bengal. It is of entirely modern growth, and owes its position to its growing importance as a manufacturing centre. The increase during the last decade has been 35 per cent., and it has grown by no less than 80 per cent. since 1872. Patna, which stands next, has a very ancient history, and its population was once much greater than at present. It was estimated by Buchanan Hamilton at 312,000; but his calculation referred to an area of 20 square miles, whereas the city as now defined has rather less than half that area. At the present time its prosperity is declining, owing to the gradual diversion of trade from the river to the railway. At the time of the Census plague was raging in the city, and the recorded population was only 134,785. Six months later, when the epidemic had subsided, a fresh count showed it to be 153,739, which was still less by nearly 17,000 than in 1881. Dacca\* was also a flourishing city long before the days of British rule. For about a century it was the capital of the Naw bs, and its muslins were once famous throughout Europe. When the demand for these muslins declined, its prosperity was seriously affected, and in 1830 its inhabitants numbered only about 70,000. Since then the growth of the jute trade has caused a revival, and the population has now risen to 90,542.

The villages of Bengal vary greatly in different parts. In Bih r, especially south of the Ganges, the buildings are closely packed together, and there is no room for trees or gardens. As one goes eastwards, the houses, though still collected in a single village site, are farther apart, and each stands in its own patch of homestead land, where vegetables are grown, and fruit trees and bamboos afford a grateful protection from the glare of the tropical sun. Farther east, again, in the swamps of East Bengal, there is often no trace of a central village site, and the houses are found in straggling rows lining the high banks of rivers, or in small clusters on mounds from 12 to 20 feet in height laboriously thrown up during the dry months when the water temporarily disappears. The

while in the newer towns the industries are carried on by foreign capital, and even the employées come from other parts of the country. The mills of Howrah and the coal-mines of ASANSOL are alike worked, with British capital, by coolies from Bihār and the United Provinces, and the shopkeepers, who are enriched by the trade they bring, are also for the most part foreigners.

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The villages of Bengal vary greatly in different parts. In Bihār, especially south of the Ganges, the buildings are closely packed together, and there is no room for trees or gardens. As one goes eastwards, the houses, though still collected in a single village site, are farther apart, and each stands in its own patch of homestead land, where vegetables are grown, and fruit trees and bamboos afford a grateful protection from the glare of the tropical sun. Farther east, again, in the swamps of East Bengal, there is often no trace of a central village site, and the houses are found in straggling rows lining the high banks of rivers, or in small clusters on mounds from 12 to 20 feet in height laboriously thrown up during the dry months when the water temporarily disappears. The

Bihār, then North Bengal, and then, in order, West Bengal, Central Bengal, and South Bihār. At the Census of 1901 East Bengal again heads the list, and is followed in order by the Chotā Nāgpur plateau, Orissa, West Bengal, North Bengal, and Central Bengal. The population of North Bihār is stationary, while that of South Bihār has suffered a loss of 3·6 per cent.

So far as the figures go, the rate of growth in the Province as a whole shows a progressive decline, but this is due to a great extent to omissions at the earlier enumerations. The pioneer Census of 1872 was admittedly very incomplete. That of 1881 was much more accurate; and although it is impossible to estimate, even approximately, the extent to which this affected the comparative results of the two enumerations, it would probably be quite safe to say that, if the two enumerations had been equally accurate, the excess of the figures for 1881 over those for 1872 would have been less than the increment disclosed by the Census of 1901 as compared with that of 1891. But although the Census of 1881 was very much more complete than that of 1872, there were still tracts where the standard of accuracy fell considerably below that attained ten years later; and it has been estimated that of the increase disclosed by the Census of 1891, about half a million may be ascribed to the greater accuracy of that enumeration, but even so the increment then recorded exceeds that of the last decade by about 800,000. It is calculated that the plague, which appeared for the first time in 1898, accounted for 150,000 deaths; while the cyclone of October 24, 1897, which devastated large tracts in Chittagong\*, is believed to be responsible, directly and indirectly, for a mortality of about 50,000. Apart from the deaths due to plague and cyclone, there seems no reason to believe that there has been any general increase in the death-rate, and the slower rate of growth seems to be due rather to a falling off in the birth-rate. In Orissa and Central and West Bengal the birth-rate prior to 1891 was abnormally high, owing to the recovery, in the one case, from the famine of 1866, and, in the other, from the ravages of malarial fever. In Bihār successive bad seasons have led to various preventive checks on the growth of the population; but, as noticed elsewhere, they do not appear to have affected the death-rate, and it is only among the wild tribes of Chotā Nāgpur that a certain amount of mortality was possibly attributable to famine.

The number of immigrants to Bengal from other parts of India, according to the Census of 1901, is 728,715, and the corresponding number of emigrants is 879,583. By far the greatest influx is from the United Provinces, which send a continually growing supply of labourers for the mills of the metropolitan Districts and the coal-fields of Burdwan and Mānbhūm, and for earthwork, *pālki*-bearing, &c., throughout the Province. The total number of persons born in the United Provinces

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Births and deaths are recorded throughout the Province, except in Angul, the Chittagong Hill Tracts\*, and the Feudatory States. The present system of mortuary registration was introduced in 1869. The duty of reporting deaths was imposed on the *chaukidārs*, or village watchmen, and not on the relations of the deceased. In 1876 the system was extended to births; but the returns received were so incomplete that they were soon discontinued and, except in towns, for which special legislation was undertaken in 1873, deaths alone were registered until 1892. In that year the collection of statistics of births as well as of deaths was ordered, and the system now in vogue was introduced. In the *Chaukidāri Amendment Act* of 1892, the reporting of vital occurrences was made one of the legal duties of the *chaukidārs*. The births and deaths occurring in each beat are entered on leaflets by the *chaukidār*, or, if he be illiterate, by the *panchāyat*, and taken by the former to the police station when he attends his weekly muster. A consolidated monthly statement is compiled at the police station and submitted to the Civil Surgeon, who prepares a similar return for the whole District. The accuracy of the reporting is checked by the police and other local officers, but the most valuable testing agency is that of the vaccination establishments, who are required to make inquiries regarding vital occurrences when on their rounds to test the vaccination operations. Errors and omissions thus brought to light, which usually range from 1 to 1½ per cent. on the total number of vital occurrences, are communicated to the District Magistrate and the *chaukidārs* at fault are punished. Under the special Act for towns the reporting of births and deaths by the nearest male relative was made compulsory. The information was collected for some time by the municipal authorities, but the results were not satisfactory, and the duty was subsequently transferred to the police.

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As in other parts of India, so also in Bengal, the infant mortality is very high, and it was estimated in 1891 by Mr. Hardy that only 71 per cent. of male and 75 per cent. of female children survive the first year of life. During the second year the mortality is believed to be only one-third as great as in the first year, and it then continues to fall rapidly.

#### VITAL STATISTICS AS REGISTERED

	Population under registration.	Ratio of registered births per 1,000.	Ratio of registered deaths per 1,000.	Deaths per 1,000 from			
				Cholera.	Small-pox.	Fever.	Bowel complaints.
1881	66,106,026	} Not available.	19.0	1.3	0.4	15.7	0.9
1891	70,388,083		26.9	3.3	0.2	18.9	0.6
1896	71,070,233		34.2	3.2	0.2	24.8	0.7
1901	74,428,193		31.0	1.5	0.5	21.7	0.8

The actual population shows a slight deficiency of females, who number only 998 to every 1,000 males<sup>1</sup>; but if the effects of migration be discounted by considering only the natural population, i.e. the persons born in the Province, it appears that the females exceed the males in the ratio of 1,003 to 1,000. They are in marked excess in Bihār and Orissa and, to a less extent, in West Bengal and the Chotā Nāgpur plateau. East of the Bhāgīrathi, where the Mongoloid element in the population is largest, they are in a considerable minority. There has been a steady decline in the proportion of females since 1881, due to the fact that the most progressive tracts are, generally speaking, those where males predominate, while many of the Districts with the largest proportion of the other sex are stationary or decadent. In urban areas females are generally in marked defect, and in Calcutta they are only half as numerous as the males.

The most striking fact brought out by the statistics of marriage is the universality of this institution. The number of persons, other than those suffering from some bodily or mental affliction, who go through life unmarried is extremely small. About half the total number of males were returned at the Census as unmarried, but of these four-fifths were under fifteen years of age. Only one-third of the female popula-

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Civil condition.	Sex.	1881.	1891.	1901.
Unmarried	Male . .	15,403,131	16,881,400	17,747,071
	Female . .	9,830,370	11,096,693	11,701,711
	Total . .	25,233,501	27,978,093	29,448,782
Married . .	Male . .	16,381,811	17,138,038	18,103,648
	Female . .	16,445,679	17,257,257	18,151,092
	Total . .	32,827,490	34,395,295	36,254,740
Widowed . .	Male . .	1,333,163	1,484,295	1,526,063
	Female . .	7,195,705	7,382,018	7,515,281
	Total . .	8,528,868	8,866,313	9,041,344

NOTE.—The figures are for British Districts only, and those for 1881 and 1891 exclude the Chittagong Hill Tracts\* as civil condition in that District was not recorded at those enumerations.

Excluding immigrants, the languages spoken in Bengal belong to one or other of four linguistic families: Aryan, Dravidian, Mundā or Kolarian, and Tibeto-Burman. Of these, the languages of the Aryan family are by far the most important, being spoken by no less than 95 per cent. of the total population. The Mundā family comes next, but its speakers represent only  $3\frac{1}{2}$  per cent. of the total, while the other two families each claim less than 1 per cent. The Aryan languages are spoken in the plains by almost the whole population, while those of the other families are current only in the hills or among recent settlers in the plains. The home of the Mundā and Dravidian dialects is in the Chotā Nāgpur plateau. The Tibeto-Burman languages are found partly in Darjeeling and Sikkim and the adjoining District of Jalpaiguri\*, and partly in the south-eastern corner of Bengal, in the Chittagong Hill Tracts\* and Hill Tippera\*. There are also a few scattered colonies of people speaking languages of this family in Dacca\* and Mymensingh\*. All these non-Aryan dialects are gradually dying out, and are being replaced by some Aryan form of speech. The main Aryan languages of Bengal are Bengali, Bihārī, Eastern Hindī, and Oriyā. The Census does not distinguish Bihārī from Hindī. On the average, of every 1,000 persons in the Province, 528 speak Bengali, 341 Hindī (including Bihārī), 79 Oriyā, and 1 Khas, leaving only 51 persons per 1,000 for all the other languages put together.

Language spoken.	1881.	1891.	1901.
Bengali . . .	35,785,208	37,898,102	40,714,099
Hindī . . .	24,390,566	25,985,028	26,151,361
Oriyā . . .	4,186,272	4,605,626	4,561,323
Mundāri . . .	28,183	493,453	383,843
Ilo . . .	...	...	236,011
Santālī . . .	1,004,239	1,360,220	1,510,881
Oraon . . .	9,229	362,803	438,226

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The actual numerical increase since 1891 is about the same for both the main religions; but compared with their previous strength, the followers of the Prophet have increased by nearly 8 per cent., while the Hindus have gained only 4 per cent. The most progressive part of the Province is that inhabited by Muhammadans, while Bihār, the stronghold of Hinduism, has returned a smaller population than in 1891; but this affords only a partial explanation of the figures, and the Muhammadans have gained ground in every Division as compared with their Hindu neighbours. The subject has been discussed at length in the *Census Report* for 1901, where it is shown that Islām gains to some extent through conversions from Hinduism, but chiefly on account of the greater prolificness of its adherents. They have a more nourishing dietary, their girls marry later, and they permit widow marriage. They are also, in Eastern Bengal, more prosperous than the Hindus, as they have fewer prejudices about changing their residence and move freely to new alluvial formations, where the soil is exceptionally fertile. The advance made by Islām is to some extent obscured by the fact that Hinduism has itself been gaining new recruits from the ranks of the animistic tribes—the Santāls, Mundās, Oraons, and other so-called aborigines. These tribes are very prolific, and yet the strength of the animistic religions has increased by only 1 per cent. The natural growth was probably at least 11 per cent., but this has been counter-balanced by conversions to Christianity and Hinduism. Christianity has taken some 60,000 during the decade. The rest (about 200,000) have entered the fold of Hinduism.

The conventional divisions of Hinduism are better known to the readers of textbooks than to the people themselves. In Bengal proper and Orissa, where the Vaishnava reformer, Chaitanya, gained a great following, the people may often give a definite reply to the question, whether they are followers of Vishnu or of Siva and his wife; but in Bihār it would be extremely difficult to collect accurate information on the subject. Moreover, it is only the members of the highest castes who concentrate their worship on the deities of the orthodox Hindu pantheon. The everyday religion of the lower orders consists largely of the propitiation of a host of minor deities and spirits. The personified powers of nature—the Earth, Sun, planets, and certain mountains and rivers—are worshipped everywhere; deified heroes are the main objects of veneration in many parts of Bihār, while in West and part of North Bengal snake-worship is widely prevalent. Farther east various aboriginal deities are adored as forms of the goddess Kālī. In addition, almost every village has its special tutelary spirits, who preside over the welfare of the community and have their home in a tree or sacred grove somewhere within its precincts. There are again numerous disembodied spirits of persons who have met with a painful or violent death, e.g. of

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are worshipped. Dharmarāj and Manasā or Bishaharī are also venerated by many ignorant Muhammadans. Sashthī is worshipped when a child is born. Even now in some parts of Bengal they observe the Durgā Pūjā and buy new clothes for the festival like the Hindus. In Bihār they join in the worship of the Sun, and when a child is born they light a fire and place cactus and a sword at the door to prevent the demon Jawān from entering and killing the infant. At marriages the bridegroom frequently follows the Hindu practice of smearing the bride's forehead with vermilion. Offerings are made to the *grāmya devatā* ('village god') before sowing or transplanting rice seedlings, and exorcism is resorted to in case of sickness. These practices are gradually disappearing, but they die hard, and amulets containing a text from the Korān are commonly worn, even by the Mullās who inveigh against these survivals of Hindu beliefs.

Apart from Hindu superstitions, there are certain forms of worship common among Muhammadans which are not based on the Korān. The most common of these is the adoration of departed Pīrs. When a holy man departs from this life, he is popularly believed to be still present in spirit, and his tomb becomes a place of pilgrimage to which persons resort for the cure of disease or the exorcism of evil spirits, or to obtain the fulfilment of some cherished wish. The educated stoutly deny that Pīrs are worshipped, and say that they are merely asked to intercede with God, but among the lower classes it is very doubtful if this distinction is recognized. Closely allied to the adoration of Pīrs is the homage paid to certain mythical persons, among whom Khwāja Khizr stands pre-eminent. This personage appears to have been a pre-Islāmic hero of the Arabs, and he is believed at the present day to reside in the seas and rivers of India and to protect mariners from shipwreck.

These unorthodox beliefs are violently inveighed against by numerous reformers, most of whom owe their inspiration to Ibn Abdul Wahhāb of Nejd in Arabia, who, early in the eighteenth century, founded the sect called Wahhābi. He rejected the glosses of the Imāms, denied the superiority of the Ottoman Sultān, made comparatively light of the authority of Muhammad, and insisted on the necessity for waging war against all infidels. His followers in India at the present day do not accept all his views, and many now hold that India is not a country in which war against the infidels is lawful. But they are all united in their opposition to non-Islāmic superstitions, and in many places they seem to have succeeded to a great extent in eradicating them.

In Eastern Bengal the Wahhābi movement met with considerable success during the nineteenth century. The principal local reformers were Dudhu Miān and Karāmat Ali. The adherents of both are known as Farāzis, or followers of the law; but there is a considerable difference

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Church Missionary Society in 1831, and now claims nearly 6,000 native Christians. Among other missions of the Church of England, those in the Twenty-four Parganas, Calcutta, and the Santāl Parganas are the most successful. The Baptists have their head-quarters in the swamps of Backergunge\* and Faridpur\*, where they have been working among the Chandāls since 1824. The number of their converts now exceeds 7,000. The Cuttack mission, founded in 1822, claims 2,000 converts. The missionaries of the Church of Scotland have been at work since 1870 in Darjeeling and Jalpaiguri\* Districts with a fair measure of success.

So far as the Anglican Church is concerned, the whole of Bengal, with the exception of Chotā Nāgpur, which is under an Assistant Bishop, lies in the diocese directly administered by the Bishop of Calcutta, the Metropolitan of India. The ecclesiastical jurisdiction of the Roman Catholic Church vests in an Archbishop resident in Calcutta, who has suffragan sees at Krishnagar and Dacca\*; but certain small communities of Portuguese origin are under the Portuguese Vicar-General of Bengal.

Of the other religions returned at the Census it will suffice to mention the Buddhists, numbering about a quarter of a million, found mainly on the confines of Burma and Nepāl; the Jains (7,831), who are chiefly immigrant traders; and the Brahmos or Hindu Theists (3,171).

Religion.	1881.	1891.	1901.
Hindu . . .	43,267,460	45,217,831	46,737,543
Animist . . .	1,668,266	2,294,506	2,242,770
Musalman . . .	21,492,766	23,437,352	25,265,342
Christian . . .	127,412	190,829	275,125
Buddhist . . .	155,269	189,122	210,628
Others . . .	59,321	17,321	13,458

NOTE.—The figures are for British Districts only, and the details for 1881 and 1891 are the adjusted figures on the area of 1901.

The most striking feature of the return of occupation is the very large proportion of persons who are dependent on agriculture. Nearly two-thirds of the population are either landlords or tenants; 6 per cent. have been returned as agricultural labourers; and of the 7 per cent. shown as general labourers the great majority must also be mainly dependent on agriculture. About 12 per cent. of the total population (including dependents) are engaged in the preparation and supply of material substances; and of these half find a livelihood by the provision of food and drink, and a fifth by making and dealing in textile fabrics and dress. Domestic and sanitary services provide employment for very few, the number of persons who support themselves in this way being barely 2 per cent. of the population, or less than a third of the proportion so employed in England and Wales. Commerce, transport,

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each homestead stands in its own orchard of fruit and palm trees. The sites have been laboriously raised by excavation, which has left tanks in every compound ; and the houses are erected on mud plinths and built round a courtyard with wooden or bamboo posts and interlaced walls of split bamboo, with thatched roofs resting on a bamboo framework. The whole is encircled with a bamboo fence, and sometimes by a moat and a thorny cane or cactus hedge. In Bihār the compounds are smaller, and where the fields are low the houses cluster thickly on the raised village sites ; the walls are of mud and the roof tiled or thatched. In the uplands of Bihār, and in Chotā Nāgpur and Orissa, the homesteads are separate, though they generally adjoin one another ; each house is surrounded by a well-manured patch of castor, tobacco, or some other valuable crop.

The Hindus bury small children who die during the first year after birth ; all others are nominally burnt, but where fuel is scarce the cremation is often far from complete, and sometimes consists only of putting a few lighted sticks in the mouth and on the face, after which the corpse is thrown into the nearest river. In tracts near the Ganges it is the practice to carry dead bodies to burning *ghāts* on its banks, and in all parts it is considered right that the ashes and main bones should be thrown into the sacred stream. The Muhammadans bury their dead, and so do the Jugis of Eastern Bengal and various sects of ascetics, and also the low castes and most aboriginal tribes. The Jugis place the corpse in a sitting position, with the legs crossed in the conventional attitude of Buddha, and the face turned towards the north-east.

The chief amusement of the people lies in attending the fairs which are held all over the Province. These gatherings are at stated seasons, generally in connexion with some bathing festival or other religious ceremony, and are attended by numerous hawkers, who set up booths for the sale of miscellaneous articles, by religious mendicants, jugglers, conjurers, actors, and musicians, all of whom contribute their quota to the entertainment of the crowd. Every market is thronged by gaily dressed crowds, who exchange the gossip of the day and discuss the latest *cause célèbre* while making their weekly purchases. The great annual religious festivals afford an excuse for merry gatherings, especially at the New Year in April, when numbers congregate in the fields and amuse themselves with wrestling, hook-swinging, which now takes the form of a merry-go-round, and gossip. Every one goes mad with merriment at the Holi festival, and many Musalmāns enjoy the fun as much as the Hindus. Their own religious festivals are attended by devout worshippers ; they are very fond of religious discussions, and immense crowds gather when famous Maulvis are pitted against each other to argue some knotty point of law or practice. Football is by far

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There are of course local exceptions to this broad classification of soils and surface conditions. In North Bihār, for instance, there are numerous saucer-shaped depressions, sometimes of considerable extent, in which rice thrives. The soil in these depressions is generally a strong clay, with a much smaller admixture of sand than is found in the higher uplands which mark the deposits of some ancient river. Again, in the broad belt of hilly country which surrounds the Chotā Nāgpur plateau, rice can be grown only in the valleys. The hill slopes are steep, and are covered with forest and dense undergrowth, except where they have been artificially cleared. Scanty crops of millets and pulses are raised in patches on the hill-sides; and where the forest has been recently cleared, the primitive form of nomadic culture known as *jhūm* is practised, as it is also in the Chittagong Hill Tracts\*.

The distinction between the east and west of the Province, due to the difference in soils and surface, is accentuated by the unequal distribution of rainfall, which is generally far less regular and copious in the west than in the east. The annual fall in the western tract averages only 52 inches, as compared with 73 inches in the east. Rain commences much earlier in North and East Bengal than it does farther west, and heavy showers in April and May facilitate the cultivation of jute and early rice. Moreover, the average yearly humidity in the east, including Orissa, is 86 per cent., as compared with only 74 per cent. in the west of the Province.

Not only do the eastern Districts receive a great deal more rain, but, owing to the annual overflow of the great rivers that traverse them, they remain practically under water for six months in the year, and the people live on little island mounds and can move about only by boat. The surface of this tract is low and flat, and much of it is covered with huge marshes where rice and jute luxuriate. In fact, in the east of the Province rice and jute are grown almost exclusively, the former occupying two-thirds, and both together no less than three-fourths, of the gross cropped area.

In the west all this is changed. Rice is still the principal crop, but the rainfall is often insufficient to bring it to maturity, and has to be supplemented by artificial irrigation; fortunately the broken surface

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and the Sundarbans. They show that of the total area<sup>1</sup> of 146,132 square miles, 76,454 square miles, or 52.5 per cent., were cropped in 1903-4. Of the remainder, 4,372 square miles, or 3 per cent. of the whole, were covered with forests, 35,263 square miles (24.1 per cent.) were not available for cultivation, 19,470 square miles, or 13.3 per cent., were cultivable waste other than fallow, and 10,573 square miles (7.2 per cent.) were fallow. An area of 16,925 square miles, or 22 per cent. of the cultivated area, was returned as cropped more than once in the year.

Food-crops occupy 82 per cent. of the gross cropped area; 6 per cent. is under oilseeds,  $4\frac{1}{2}$  per cent. under fibres, and sugar-cane and tobacco each occupy about 1 per cent. Of the food-crops, rice is by far the most important, as it occupies 54,690 square miles, or 71 per cent. of the net cropped area. Next come various cereals and pulses with  $11\frac{1}{2}$  per cent., and these are followed by maize (4 per cent.), wheat and barley (3 per cent. each), and gram and *maruā* (2 per cent. each). Among the non-food-crops, jute (5 per cent.) occupies an area second only to that of rice. Of the oilseeds, rape and mustard, together covering 3,125 square miles, are grown most extensively.

There are innumerable varieties of rice, each possessing special characteristics which adapt its cultivation to particular localities. They may all, however, be classified, according to the harvesting season, under three main heads: the winter rice, occupying 42,970 square miles; the early rice, 10,940 square miles; and the spring crop, 780 square miles.

The winter rice is grown on low land. A piece of high ground is usually selected for a seed nursery, ploughed in May or June after the first rain, and sown broadcast. In July or August the seedlings are transplanted to flooded fields, which have been ploughed and re-ploughed till the whole surface is reduced to mud, and the crop is harvested between November and January. In the swamps of Eastern Bengal, however, a variety of long-stemmed rice is sown broadcast after one or two ploughings; by harvest-time the fields are several feet under water, and the rice, which rises with the flood-level, is reaped from boats, the ears only being cut. In West Bihār the fields are drained in September when the rice is flowering, and flooded when the grain is forming in October. It is this practice, known as *nigarh*, which makes

<sup>1</sup> In Bengal as now constituted, the net cropped area was 54,138 square miles, or 49.1 per cent. of the total area of 110,217 square miles. Of the remainder, 4,419 square miles, or 4 per cent. of the whole, were covered with forests, 26,161 square miles (23.7 per cent.) were not available for cultivation, 16,421 square miles (14.9 per cent.) were cultivable waste other than fallow, and 9,078 square miles (8.3 per cent.) were fallow. Altogether 10,369 square miles, or 9.4 per cent. of the net cropped area, were returned as cropped more than once in the year.

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not far short of 3,900 square miles, and the exports in 1900-1, a bumper year, were valued at 14 millions sterling. The tract in North and East Bengal which lies between  $23^{\circ}$  and  $26^{\circ} 30'$  N. and  $88^{\circ}$  and  $91^{\circ}$  E. is by far the largest jute-growing area in the world. The crop is sown in April and reaped in August, and, after retting, the fibre is baled to save freight. The chief centres of the jute trade and baling are NĀRĀYANGANJ\*, SĪRĀJGANJ\*, and CHĀNDPUR\*. The average yield per acre is estimated at 10.71 cwt.

The various oilseeds are commercially important, and collectively occupy nearly 6,250 square miles. Rape and mustard account for more than half this area, and are grown extensively in North Bengal and Mymensingh\*. Linseed is commonly grown as a catch-crop after the winter rice has been reaped. Other oilseeds are *til* or gingelly (*Sesamum indicum*), castor, and *sarguja* or niger-seed (*Guizotia abyssinica*), the latter grown largely in Chotā Nāgpur. These are mostly spring crops, sown in October and harvested in March. Rape, mustard, and linseed yield about 4.41 cwt. per acre, and the other crops about 3.12 cwt.

Sugar-cane, with 1,020 square miles, is usually planted in February or March and occupies the ground for ten or eleven months; the normal out-turn is 22 cwt. per acre. The juice is boiled and sold as *gur* or jaggery, and is also refined into sugar; large refineries have recently been started at Ottur in Muzaffarpur, and elsewhere in North-West Bihār, where the cultivation of sugar-cane is to some extent replacing indigo. Tobacco is grown everywhere in small quantities and occupies 780 square miles; it is cultivated on a large scale in Rangpur\* and the neighbouring Districts of North Bengal, whence the leaf is exported to Burma and made into cigars. The produce varies from 4.41 to 8.82 cwt. per acre in Bengal, and from 11.75 to 14.69 cwt. in Bihār; it is sown in November and reaped in March.

Indigo occupies 390 square miles, chiefly in North Bihār, though it is still cultivated in Central Bengal; the area is shrinking, as the natural dye suffers from competition with the artificial substitute. Indigo is sown in March, and the leaf is cut in July and again in September; the yield of dye varies from 12 lb. per acre in Bengal to 20 lb. in Bihār. The general practice is for the planter to take a lease of a village, and then arrange with the cultivators to grow indigo, assisting them with seed and cash advances, though in some places the villagers grow it independently and sell it to the factory by weight.

The poppy is grown in West Bihār, and to a small extent in Chotā Nāgpur, and occupies 390 square miles. It is cultivated with the help of Government advances, and the opium is sold at a fixed rate to Government, as will be described in the section on Miscellaneous Revenue. The seed is sown in November, and the crop is collected in March and April; the yield varies from 10 lb. to 18 lb. per acre. Cotton

not far short of 3,900 square miles, and the exports in 1900-1, a bumper year, were valued at 14 millions sterling. The tract in North and East Bengal which lies between  $23^{\circ}$  and  $26^{\circ} 30'$  N. and  $88^{\circ}$  and  $91^{\circ}$  E. is by far the largest jute-growing area in the world. The crop is sown in April and reaped in August, and, after retting, the fibre is baled to save freight. The chief centres of the jute trade and baling are NĀRĀYANGANJ\*, SĪRĀJGANJ\*, and CHĀNDPUR\*. The average yield per acre is estimated at 10.71 cwt.

The various oilseeds are commercially important, and collectively occupy nearly 6,250 square miles. Rape and mustard account for more than half this area, and are grown extensively in North Bengal and Mymensingh\*. Linseed is commonly grown as a catch-crop after the winter rice has been reaped. Other oilseeds are *til* or gingelly (*Sesamum indicum*), castor, and *sarguja* or niger-seed (*Guizotia abyssinica*), the latter grown largely in Chotā Nāgpur. These are mostly spring crops, sown in October and harvested in March. Rape, mustard, and linseed yield about 4.41 cwt. per acre, and the other crops about 3.12 cwt.

Sugar-cane, with 1,020 square miles, is usually planted in February or March and occupies the ground for ten or eleven months; the normal out-turn is 22 cwt. per acre. The juice is boiled and sold as *gur* or jaggery, and is also refined into sugar; large refineries have recently been started at Ottur in Muzaffarpur, and elsewhere in North-West Bihār, where the cultivation of sugar-cane is to some extent replacing indigo. Tobacco is grown everywhere in small quantities and occupies 780 square miles; it is cultivated on a large scale in Rangpur\* and the neighbouring Districts of North Bengal, whence the leaf is exported to Burma and made into cigars. The produce varies from 4.41 to 8.82 cwt. per acre in Bengal, and from 11.75 to 14.69 cwt. in Bihār; it is sown in November and reaped in March.

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potatoes. In East Bengal rice straw is sometimes burnt as a manure, and sugar-cane, garden crops, potatoes, and tobacco are generally manured, though the quantity applied is very small. In Bihār refuse indigo is used with avidity where it is available in the neighbourhood of factories, and pond mud is very highly valued.

Clay soils grow winter rice year after year; occasionally a catch-crop of *khesāri* is taken as a fodder, or, if the land continues moist until harvest time, it may be ploughed and sown in East Bengal with *kalai*, and in Bihār with gram and peas or barley. Lighter soils generally bear two crops in the year—in the rainy season, early rice or jute in North and Lower Bengal, and maize or some of the inferior millets in Bihār or Chotā Nāgpur; in the winter a pulse or an oilseed in Bengal, and a mixture of various pulses and oilseeds with wheat or barley in Bihār. Potatoes often follow maize in Bihār, and jute or early rice in North and Lower Bengal, and jute itself is sometimes rotated with early rice. Sugar-cane is an exhausting crop and is generally rotated with rice. The mixture of pulses and cereals serves the purpose of rotation, as the pulses belong to the leguminous family and enrich the soil with nitrogen.

Among the cultivated fruits are the mango (*Mangifera indica*), plantain (*Musa sapientum*), pineapple (*Ananassa sativa*), jack-fruit (*Artocarpus integrifolia*), guava (*Psidium pomiferum*), custard-apple (*Anona squamosa*), *litchi* (*Nephelium Litchi*), and several varieties of fig and melon. Many parts of East Bengal are studded with coco-nut plantations. The mangoes of Darbhanga and Mālda\* enjoy a high reputation. Vegetables are everywhere cultivated in garden plots for household use, and also on a larger scale in the neighbourhood of large towns. The favourite are the egg-plant or *baigun* (*Solanum Melongena*), ground-nut (*Trichosanthes dioica*), pumpkin (*Lagenaria vulgaris*), gourd (*Benincasa cerifera*), and *arum* (*Colocasia Antiquorum*) grown in the rains, while in the winter potatoes, yams, melons, and radishes are largely cultivated. Cauliflowers and cabbages are also common, and spinach and onions are universal. Potatoes are extensively grown on the rich soils bordering the Ganges in West Bihār, and in the Hooghly and Burdwān Districts of West Bengal; they yield about 2 tons to the acre.

There has been a steady increase of cultivation during the last twenty years, but the earlier statistics were so defective that they do not afford evidence of this increase. Tillage is extended by felling the forests on upland tracts and in the submontane *tarai*, by reclaiming the sandy islands which are constantly forming in the big rivers, by embanking lands in the littoral tracts, and by cultivating the swamps of Eastern Bengal, the level of which is being gradually raised by silt deposits.

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to the extent of indebtedness in Gayā, Champāran, and Muzaffarpur Districts, where, if anywhere in the Province, it might be expected to be serious. The inquiries in Muzaffarpur and Gayā show that cultivators owe on the average Rs. 2-6 a head and cultivating labourers Rs. 1-5, and that indebtedness is decreasing. In Champāran the tenantry are badly off, and, during the decade preceding the settlement, 1·4 per cent. of the cultivators' holdings had been sold or mortgaged to money-lenders. The people are thriftless, and the majority are in debt to the *mahājan*. In Sāran only one-fifth of the cultivators are in debt, and their total indebtedness is estimated at less than a crore, whereas the net profits of cultivation amount to over 3½ crores. In the whole Province only 7,000 holdings were purchased by money-lenders in 1902, and there is no indication that the peasantry as a body are in danger of losing their lands to money-lenders. A common rate of interest is 36 per cent. per annum.

The implements in universal use are the plough, harrow, sickle, and hoe, and they vary in size and shape according to the strength of the draught cattle in use, the texture of the soil, and the description of cultivation practised. The ploughs in Bihār are generally heavier and more effective than in Bengal, and work the soil to a depth of 5 inches, whereas those in use in North Bengal scratch the surface to a depth of only 2 inches. The Cuttack and Noākhāli\* ploughs are very heavy, and the two sides are shaped like mould-boards, giving them the appearance of ridging ploughs. The Bihiyā sugar-cane mill, made in Shāhābād, and a similar type of mill made at Kushtia in Nadiā are the only improved implements which are really popular; they have largely superseded the native wooden mills.

The cattle are generally poor, especially in the east of the Province, where pasture is deficient; in the north-west some improvement has been effected by crossing with bulls imported from the United Provinces. The chief breeds of cattle are the Patna, Sītāmarhī, Bachaur, and Bhāgalpuri in Bihār, and the Siri and Nepālī in Darjeeling. These are worth from Rs. 30 to Rs. 40 a head, though the Patna milch-cattle, which were crossed half a century ago with an imported short-horn strain, sell for Rs. 80. Good buffaloes are to be found in the forests and swampy island flats, and are much prized for their milk. The only horses bred in Bengal are the weedy indigenous ponies or *tats*, which are found everywhere and are worth from Rs. 50 to Rs. 60 each. Goats abound, but are very small. Sheep are bred in Bihār and Chotā Nāgpur; the Patna breed is the best.

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Bengal possesses three important systems of irrigation canals—the SON, the ORISSA, and the MIDNAPORE. The Son Canals in Bihār are fed from the Son river by means of a weir at DEHRĪ; they supply water to Shāhābād District on the west and to Gayā and Patna Districts on the east. The system comprises (1903-4) 367 miles of main and branch canals, of which 218 are navigable, with 1,217 miles of distributaries, and 3,237 miles of village channels which are private property. The supply of water available for the *kharīf* or autumn irrigation is about 6,500 cubic feet per second. For the *rabi* or spring crops the supply is always ample. The demand fluctuates greatly according to the rainfall in September and October; the area irrigated in 1903-4 was 790 square miles, compared with 756 square miles in 1902-3. In the hot season the supply of water is very limited, but there is usually sufficient for the irrigation of about 25,000 acres of sugar-cane.

The Orissa Canals are fed mainly from the Mahānadī river, but derive part of their supply from the Brāhmanī and Baitaranī, there being in all seven anicuts or weirs. The country served by these canals lies chiefly in the delta of the Mahānadī, and, being liable to inundation, it has been necessary to protect the irrigated tracts by marginal flood embankments. Four main canals—the Tāldanda, the Kendrāpāra, the Māchgaon, and the High Level—comprise 301 miles of main and branch canals, of which 205 miles are navigable, and 1,166 miles of distributaries. There are no village channels. The supply which can be given in the *kharīf* season is 4,550 cubic feet per second. During the *rabi* season there is very little demand for water. Sugar-cane is little cultivated in these parts.

The Midnapore Canal is supplied from the Kāsai river. It is 72 miles in length and is navigable throughout, and possesses 267 miles of distributaries and 30 miles of village channels. The capacity of discharge is 1,500 cubic feet per second. The supply at the end of the *kharīf* season is, however, uncertain, and in a dry autumn there is frequently difficulty in meeting the demand for water. There is little irrigation in the *rabi* season.

In the north-west corner of Champāran District the TRIBENĪ CANAL is being constructed as a protective work. It is designed to carry enough water to irrigate about 178 square miles.

Table III at the end of this article (p. 346) gives the principal figures connected with these systems of canals; the falling off in navigation tolls is due to the development of railways.

The 'minor' irrigation works maintained by Government are the Sāran, the EDEN, and the Tiar or Madhuban canals. The Sāran canals have a head sluice on one of the side channels of the Gandak river. There is no weir, and, owing to alterations in the main channel, it is

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that 1·6 per cent. of the population is engaged in catching, curing, and selling fish, a percentage which rises to 2·6 in the Presidency, Rājshāhi\* and Dacca\* Divisions; moreover, one cultivator in every twenty is returned as a fisherman also. The waters of the Bay, the rivers, and swamps swarm with fish, and every ditch and puddle furnishes small fry to eke out the frugal diet of the people. The best salt-water fish are the *bekti*, *tapsi* or mango-fish, mullet, pomfret, and sole. Inland the *hilsa* (*Clupea ilisha*) is found in shoals in the Ganges, while the *rohu* (*Labeo rohita*) and the *kātāl* (*Catla buehanani*) abound everywhere, as do also innumerable other varieties much esteemed by the Bengalis; prawns and crabs are caught in myriads. The mahseer is found in the higher reaches of the rivers which debouch from the Hīmālayas, and in some of the rivers of the Chotā Nāgpur plateau.

The Bengali is a very clever fisherman. In the Bay of Bengal he practises deep-sea fishing, drying his catch ashore on stakes driven into some sandy beach. The larger rivers are trawled from a sailing boat, and the smaller streams are fished from weirs. The tanks and ditches are periodically dragged, the fish at other times being angled or caught in a cast-net. Every streamlet is studded with hundreds of wicker fish-traps, while prawn cages are ubiquitous. The wonder is that any living fish escapes, so persistent and remorseless is the hunt for the finny tribe. Every other interest is subordinated to its pursuit, and not only is navigation impeded, but the drainage of the country is blocked by the obstruction of every channel and outlet.

The right of fishery in all but the largest rivers has generally been alienated by Government to private persons, having been included in the 'assets' on which the permanent settlement of estates was based, but in some cases the fishery itself is a separate 'estate.' In tanks the right of fishing vests in the owner or occupant; in the Bay and large rivers fishing is free to all.

The conditions which determine the rent paid by the actual cultivator to his immediate landlord vary widely in different parts of the Province, and even in different estates. In some large estates it is paid according to rates current throughout a village, while in others lump-rents prevail. In Orissa and the Santāl Parganas the rents have been fixed by Settlement officers. In Bengal proper, lump-rents are generally paid, except for newly reclaimed lands, and inquiry often fails to detect the existence of any standard rates known to the people. In large estates in Bihār, on the other hand, it is usual to find the rent calculated according to rates applied to different classes of soil or to particular crops. Generally speaking, the principal factors which affect the incidence of rent are the fertility of the land, the density of population, the antiquity of the holding, the social position of the tenant, and the position and character of

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rates for skilled and unskilled labour in the different sub-provinces and in the three chief cities are shown below :—

	Sub-provinces.			Cities.		
	Bengal.	Orissa.	Bihār.	Calcutta.	Dacca*.	Patna.
	A. P.	A. P.	A. P.	A. P.	A. P.	A. P.
Skilled labour .	7 10	5 3	4 9	8 11	6 7	3 0
Unskilled do. .	4 1	2 9	2 6	...	3 4	2 0

In Bihār there has been a nominal rise of 7 per cent. in the wages of unskilled labour during the last decade, and in Bengal of 14 per cent. ; in Orissa, on the other hand, wages are reported to have fallen 12 per cent. during the same period. In Patna city they have increased 9 per cent., while a decrease of 2 per cent. has taken place in Dacca\*. The wages of skilled labour have increased by 11 per cent. in Bihār, 15 per cent. in Orissa, and 5 per cent. in Bengal ; they have increased in Calcutta by 20 per cent., while in Patna and Dacca\* they are reported to have fallen by 5 and 13 per cent. respectively.

The remuneration of village servants is fixed by custom. In Bihār each artisan takes his recognized share of grain when the crop has been reaped and brought to the threshing-floor ; he often holds in addition a small plot of land rent-free, in remuneration for services rendered to the *zamīndār*. In Orissa the village employés serve a fixed circle of from 30 to 50 families and receive small monthly payments of grain and money, with other customary perquisites. This system is not found in Bengal proper, where the village organization, with its complete equipment of servants and artisans, never seems to have been developed.

The rise in wages has not kept pace with the increase in the price of food-grains, for, whereas during the last twenty years the price of rice has risen by 38.5 per cent., the wages of unskilled labour have risen by only 15 and of skilled labour by 25.4 per cent. during the same period. The fact is that wages are largely governed by custom, and it seems probable that the increased demand for labour due to the development of railways and to industrial expansion has had more to do with the rise in wages than the increase in the price of food-grains. The payment of day-labourers and village artisans and servants in kind also tends to keep down wages in spite of high prices.

The average prices of certain staples at important centres during the last three decades and for the year 1903-4 are shown in Table IV at the end of this article (p. 347). The increase during the years 1890-1900 was due to the famines of the decades, which caused a heavy drain of food-stuffs from this Province.

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The average prices of certain staples at important centres during the last three decades and for the year 1903-4 are shown in Table IV at the end of this article (p. 347). The increase during the years 1890-1900 was due to the famines of the decades, which caused a heavy drain of food-stuffs from this Province.

forests, rather than by the benefits to be derived from them; and for many years their sole aim was to expedite their conversion into cultivated fields. Many of the best forests were alienated, and reckless exploitation ran riot. The work of destruction was hastened by the wasteful form of shifting cultivation known as *jhūm*, the constant occurrence of forest fires, and the direct and indirect demands for railway construction. But with the growing scarcity of valuable timber, and the observed bad effects upon climatic conditions of the wholesale removal of forest growth, a reaction set in; and scientific forest management and conservancy in Bengal dates from the year 1854, when the first Conservator of Forests was appointed. As in other Provinces, rules were then laid down for the control of forest matters, which eventually led up to the passing of the Indian Forest Act, VII of 1878.

Under this enactment land at the disposal of the state may be divided into 'reserved,' 'protected,' and 'village' and 'unclassed' forests, and powers are also taken for the issue of orders with the object of preventing the destruction of private forests. No such orders have hitherto been issued in Bengal, and there are no 'village' forests. The arrangements for conservancy are most complete in the case of 'reserved' forests. These are permanently demarcated; private rights, where they exist, are defined, commuted, or provided for elsewhere, and every effort is made to prevent damage by fire. Timber is extracted from the greater part of these forests in accordance with scientific working-plans, and the regeneration of suitable species is carefully attended to. In 'protected' forests the arrangements are less elaborate: private rights are recorded but not defined, and the efforts of the Forest department are directed mainly to the prevention of reckless felling and to securing to Government its dues on account of forest produce extracted. As cultivation extends, the area of these 'protected' forests tends to become more and more restricted. There are also, in the Chittagong Hill Tracts\*, certain waste lands at the disposal of Government, in which even this modified control is considered inadvisable. The forests on such lands are known as 'unclassed,' and their management is regulated by executive orders.

In consequence of the permanent revenue settlement, there is very little land at the disposal of Government in the greater part of Bengal proper and Bihār, and the forests there have long since yielded to the axe and the plough. Owing to the moisture-laden winds of the south-west monsoon, and the generally low and level surface of the country, which prevents rapid draining and denudation, their disappearance has not been accompanied by the ill effects which have supervened in other less favourable conditions. Except in a few limited areas, vegetation is sufficiently plentiful; and the bamboos, palms, and fruit trees grown by the villagers suffice to meet all their ordinary requirements. For other

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by purchasers, and departmental working is resorted to only for the supply of *sāl* sleepers to railways, and of fuel to the Commissariat department at Darjeeling. Water-carriage is little used save in the forests of Angul, the Sundarbans, and the Chittagong Hill Tracts\*, and to some extent in the Jalpaiguri\* and Buxa\* forests. The practice of shifting cultivation, which is most injurious not only on account of the destruction of forest growth, but also because the fires employed for clearing the felled areas often spread in all directions, is now almost everywhere forbidden, though it is still allowed in the 'unclassified' forests of the Chittagong Hill Tracts\* and in the 'protected' forests in the Santāl Parganas. The most valuable minor products of the forests are bamboos, *golpātā* (palm) leaves, mica, honey and wax, thatching grass and *sabai* grass (*Ischaemum angustifolium*), the last named being largely used in the manufacture of paper.

The experiment of cultivating rubber (*Ficus elastica*) has been tried in the Darjeeling *tarai*, the Tista valley, and Chittagong\* with some success, but the plantations are still on a very small scale.

Measures for protecting the forests from fire were commenced in 1872, and have now been extended to all the more valuable areas. At the beginning of the dry season fire-lines, as well as all boundaries and forest roads, are cleared of grass and jungle, and a number of fire-watchers are employed to assist the ordinary protective establishment in patrolling the forests. In many parts, e.g. in the Sundarbans, the forests are not inflammable, and in others, owing to the damp climate, fire-protection is an easy matter. It is in the dry climate of Chotā Nāgpur and Orissa that forest fires are most to be feared, and the greatest care has to be taken; but, in spite of all precautions, large areas in these portions of the Province are frequently burnt. Of the total area of 2,169 square miles in 1903-4, over which protection from fire was attempted, 94.98 per cent. was successfully protected at a cost of Rs. 7-8-7 per square mile.

With the exception of a small area in Jalpaiguri District\*, there are no special fuel and fodder Reserves. In the temporarily settled estates of Orissa, however, lands have been set apart in many villages, during the recent settlement operations, for grazing purposes, while in the Government estates of the Kolhān and Palāmau and in some recently settled tracts in Singhbhūm District blocks of waste land have been detached from the 'protected' forest areas and included in the limits of villages, to meet the possible requirements of the villagers in respect of fuel-supply and pasture grounds. In the case of famine or fodder scarcity, the 'reserved' forests in the affected area are thrown open for the free removal of fruits and roots, and in some cases for grazing.

During the ten years ending 1890, the forest revenue, expenditure, and surplus averaged, respectively, 6.51, 3.86, and 2.65 lakhs; and for

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a height of 6 feet, and, after this drive has advanced some distance, to deepen it to the full height of the seam by cutting out the remainder of the coal in successive steps. In a few mines the galleries are commenced in the lower portion of the seam, and are heightened by dropping the coal left above. In the East Indian Railway collieries in the Girīdih coal-field the coal is extracted by a combination of the pillar and long wall methods. The lower portion of the seam is cut up into pillars 6 feet in height, and the latter are thinned down till they are only just able to carry the weight of the overlying coal. These thinned pillars are then blown down by dynamite, and the top coal (17 feet thick), which comes away readily from a strong sandstone roof, falls on the floor. When a large area of coal has been extracted, a rib of coal is left against the worked-out portion, or goaf, and a new set of workings is started.

The methods of raising the coal to the surface vary from the primitive means of baskets carried on the heads of cooly women to hauling sets of 5 or 10 tubs on inclines provided with rails, or hoisting in well-fitted shafts up to 640 feet in depth by direct-acting engines. All three methods are in vogue in the chief coal-fields. The coal is cut with picks of English pattern and made by natives of many castes, including the aboriginal Santāls, Mundās, and Oraons, and the semi-Hinduized Musahars, Bauris, Bāgdis, Ghāt-wāls, Mahlis, Turis, Chamārs, Telis, and Pāsīs. The majority are recruited from the villages surrounding the coal-fields, and from the adjoining parts of Bānkurā, Mānbhūm, Bīrbhūm, and the Santāl Parganas.

The underground work is performed at a fixed price per tub of coal by families, or gangs of men, women, and children, who choose their own hours of labour. The men cut the coal, and the women and children carry it to the tubs. As a rule, they also push the tubs to the shaft or incline, but at one colliery 110 horses and ponies are employed to 'lead' the coal underground. A man can cut about  $2\frac{1}{2}$  tubs ( $1\frac{1}{4}$  tons) of coal per day of eight hours; but he seldom works more than five days in the week, and strictly observes all high-days and holidays. The number of working days per year varies from 200 to 300. The total value of coal at the pit's mouth in 1901 was 1.54 lakhs; and as there were 79,652 persons employed, the value of each person's out-turn for the year was Rs. 191. Of this sum, the colliery owner's profit, the landowner's rent or royalty, the cost of stores, tools and equipment, and the superior establishment take about Rs. 98, leaving about Rs. 93 a year as the earnings of each person, or about Rs. 15-8 a month per family.

In 1774 Mr. S. G. Heatly (the reputed discoverer of Bengal coal) and Mr. J. Summer applied to Government for the right of working coal at Rāniganj. In 1777 six mines were worked and 90 tons of coal were

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DETAILS OF OUTPUT AND LABOUR FOR EACH  
COAL-FIELD IN 1903

Particulars.	Total.	Name of coal-field.				
		Giridih.	Jherriā.	Rāniganj.	Daltonganj (Palāmau).	Rāj- mahāl.
Number of mines .	27	9	115	142	2	4
Output in thou- sands of tons .	6,566	767	2,745	3,020	34	...
Average number of persons em- ployed daily .	73,928	10,691	28,114	33,854	1,235	34
<i>Under ground</i> .	49,274	7,739	17,789	22,913	823	10
Men . . .	33,372	5,436	10,622	16,611	697	6
Women . . .	14,744	2,213	6,510	5,892	125	4
Children (under twelve) . .	1,158	90	657	410	1	...
<i>Above ground</i> .	24,654	2,952	10,325	10,941	412	24
Men . . .	15,113	2,155	6,109	6,570	262	17
Women . . .	8,231	618	3,557	3,916	133	7
Children (under twelve) . .	1,310	179	659	455	17	...

Mica is found over a large area in Gayā, Hazārībāgh, and Monghyr Districts. It occurs in dikes and masses of pegmatite, as more or less defined shoots and patches which, in many cases, are found at the surface during the rains and are worked in the cold and hot seasons. In 1903 there were 251 mines and quarries, employing about 6,500 labourers daily. With the exception of Bendi, all the quarries and mines are worked by primitive native methods. Haulage and pumping are done by women, who are seated on ladders and pass up, from hand to hand to the surface, earthen pots filled with water or baskets with

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Throughout the Province various handicrafts are carried on, but, as a rule, the articles manufactured suffice only to meet the local demand.

**Arts and manufactures.** DACCA\* and SĀNTIPUR were formerly famous for their fine muslins; and early in the nineteenth century the quantity exported to Europe, and especially to France, was very great. From Dacca\* alone the exports in 1817 were valued at 152 lakhs. Ordinary cotton goods were also in great demand for the European market, and as early as 1706 efforts were made to induce weavers to settle in the neighbourhood of Calcutta. The introduction of machinery in Europe has not only killed the export trade, but has flooded the country with cheap piece-goods and seriously crippled the local weaving industry. Country-made goods, however, are more durable, and, in the more remote parts, country weavers have maintained their business. The weavers of SERAMPORE, who use an improved loom, still hold their own, and so do those of Dacca\*, where a carefully bleached white cloth with a border of gold thread is made; while in Patna District the trade in cotton goods and cheap muslins made at Dinapore is still fairly brisk. Cotton-spinning, except as a domestic industry, no longer exists, and the weavers generally work with imported yarn or cotton twist.

Jute is worked up into cloth for gunny-bags, sails, and quilts, mainly in Hooghly and Dacca\*, but smaller quantities are manufactured in most parts of Bengal proper. This work is the speciality of the Kapāli caste. The yarn is prepared by the men, and the women weave the cloth. Jute is also twisted into twine from which ropes are afterwards made.

The silkworm is reared in West Bengal and in the tract where the Presidency and Rājshāhi\* Divisions meet. The industry was threatened with extinction, owing to diseases among the worms; but the subject has been investigated by Government agency, and remedies have been applied with a fair measure of success. Silk-reeling is carried on in both European and native filatures, and raw silk is largely exported, the value of the exports amounting in 1903-4 to 47 lakhs. Silk thread is twisted from the reeled silk by women, and is knotted and uneven. The cloth woven is thus of a rough quality, but in spite of this silk-weaving was once a flourishing industry. Of late years it has suffered greatly from the competition of silks made in Japan, China, and Italy, and the value of manufactured silk exported in 1903-4 was estimated at only 6 lakhs compared with 18 lakhs in 1881. The weaving of mulberry silk, which is made chiefly for export, is carried on in Murshidābād and several Districts of West Bengal. That of *tasar* silk, which is in demand among natives, who wear it when performing religious ceremonies, has its head-quarters in West Bengal, Mānbhūm, and Gayā; the business is still fairly prosperous, but, as the worm

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by Muhammadans. They are made either by casting and moulding, or by joining together pieces of beaten-out metal, which at the present day is usually imported in sheets from Europe. The methods employed are of the simplest, and practically no machinery is used.

The manufacture of earthen vessels is carried on everywhere in Bengal, but the best ware is made in Burdwān District, on the banks of the Bhāgīrathi, where the clay is especially suitable for the manufacture of durable pottery. Black earthen jars are exported in large quantities from the Sātkhira subdivision of Khulnā, and are used for storing oil and grain. In Monghyr porous water vessels are made, and decorated pottery of graceful form is produced at Sasarām. Ornamental pottery is also made at Siwān in Sāran, which is remarkable both for its shape and decoration. The vessels are baked in earthen jars to prevent contact with the flames; they thus become black when baked, and are then glazed with a mixture of clay and fuller's earth. Owing partly to the absence of suitable clay, and partly to the fact that Hindus think it necessary to change their earthen vessels constantly, nothing has yet been done in Bengal towards the production of porcelain or white earthenware. Glazes also are rarely resorted to. Occasionally vessels are smeared, before burning, with a mixture of fine clay, but the art of fusing glazes is not understood. Clay figures of some merit are moulded at Krishnagar, and idols with no pretensions to artistic skill are made everywhere.

Stone-carving, as an art, is practised only in Gayā, where small statues of gods and figures of animals are made of granite; the carving of stone for the decoration of temples and buildings has almost entirely died out in Bengal. Glass-ware is made, chiefly in Patna, from Son river sand mixed with carbonate of soda. The glass is green and clouded, but at Patna a fair amount of white glass is now made. Bottles for holding perfumery, lamps for illuminations, and glass bangles are the chief articles produced. Bracelets of coarse glass are also made at Bhāgalpur.

The ordinary carpenter of Bengal is a very rough workman, and is capable of little beyond the making of ploughs and other simple articles in common use among the people. In North and East Bengal, Orissa, and Chotā Nāgpur, the number even of such carpenters is deficient. Carving in wood was formerly practised as an adjunct to architecture, and there are traces of the skill of former workmen in the carved balconies of Patna, Gayā, and Muzaffarpur. This sort of work has almost entirely died out; and the only indigenous wood-carving deserving of mention at the present time is that of the ebony workers of Monghyr, who make pieces of furniture, boxes and other small articles, which are inlaid with patterns in horn and ivory. In some parts, especially in the Patna Division, carpenters have been taught by Europeans to make

by Muhammadans. They are made either by casting and moulding, or by joining together pieces of beaten-out metal, which at the present day is usually imported in sheets from Europe. The methods employed are of the simplest, and practically no machinery is used.

The manufacture of earthen vessels is carried on everywhere in Bengal, but the best ware is made in Burdwān District, on the banks of the Bhāgīrathi, where the clay is especially suitable for the manufacture of durable pottery. Black earthen jars are exported in large quantities from the Sātkhira subdivision of Khulnā, and are used for storing oil and grain. In Monghyr porous water vessels are made, and decorated pottery of graceful form is produced at Sasarām. Ornamental pottery is also made at Siwān in Sāran, which is remarkable both for its shape and decoration. The vessels are baked in earthen jars to prevent contact with the flames; they thus become black when baked, and are then glazed with a mixture of clay and fuller's earth. Owing partly to the absence of suitable clay, and partly to the fact that Hindus think it necessary to change their earthen vessels constantly, nothing has yet been done in Bengal towards the production of porcelain or white earthenware. Glazes also are rarely resorted to. Occasionally vessels are smeared, before burning, with a mixture of fine clay, but the art of fusing glazes is not understood. Clay figures of some merit are moulded at Krishnagar, and idols with no pretensions to artistic skill are made everywhere.

Stone-carving, as an art, is practised only in Gayā, where small statues of gods and figures of animals are made of granite; the carving of stone for the decoration of temples and buildings has almost entirely died out in Bengal. Glass-ware is made, chiefly in Patna, from Son river sand mixed with carbonate of soda. The glass is green and clouded, but at Patna a fair amount of white glass is now made. Bottles for holding perfumery, lamps for illuminations, and glass bangles are the chief articles produced. Bracelets of coarse glass are also made at Bhāgalpur.

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The great centre of the Indian cotton-manufacturing industry is in Bombay, but it is steadily growing in importance in Bengal, and there are now ten mills employing about 11,000 hands, compared with an average of six mills employing 6,000 hands in the decade 1881-90. In 1903-4 the out-turn of yarn exceeded 46,000,000 lb. and that of cloth was nearly 700,000 lb. The capital invested has risen from 83 to 177 lakhs.

The principal statistics in connexion with the jute and cotton industries are shown in the following table:—

	Number of mills.	Number of looms.	Number of spindles in thousands.	Average daily number of persons employed.
<b>Jute-mills:</b>				
1880-1 . . .	19	4,893	66	33,994
1890-1 . . .	25	8,066	162	61,563
1900-1 . . .	34	15,169	314	110,051
1903-4 . . .	36	18,234	373	122,724
<b>Cotton-mills:</b>				
1880-1 . . .	6	126	167	4,166
1890-1 . . .	8	...	297	8,790
1896-7 . . .	9	200	348	10,900
1900-1 . . .	10	209	411	8,030
1903-4 . . .	10	213	451	10,230

There were in 1903 four paper-mills with a capital of 50 lakhs, employing on the average nearly 900 hands each, and producing nearly 36,000,000 lb. of paper. The capital invested and the production have quadrupled since 1881-90. Other large industries are also growing apace, such as iron and brass foundries, oil-mills, silk, soap, and lac factories, potteries, rope works, &c.; and for miles above Calcutta the banks of the Hooghly present a scene of industrial activity which bids fair in time to rival that of the largest towns in Europe. The principal statistics of these undertakings are shown in the following table:—

Number in	Industries.							
	Iron and brass foundries.	Oil-mills.	Lac factories.	Potteries.	Rice-mills.	Rope-works.	Silk factories.	Silk-mills.
1881 .	4	...	1	1	3	2	20	4*
1891 .	15	32	39	1	2	5	80	2*
1901 .	25	47	16	2	1	7	71	10
1903 .	38	63	48	1	1	7	62	8

\* These figures include some weaving establishments, the number of which was not reported.

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The maritime trade of the Province is concentrated in CALCUTTA. CHITTAGONG\*, the terminus of the Assam-Bengal Railway, exports jute, rice, and tea, and imports salt and oil; but its total trade is still comparatively small. The Orissa ports do an insignificant rice trade. The head-quarters of the jute trade are NĀRĀYANGANJ\*, SIRĀJGANJ\*, CHĀNDPUR\*, and MĀDĀRĪPUR\* in East Bengal, and JALPAIGURĪ\* in North Bengal; the jute-mills line both banks of the Hooghly river from 10 miles below to 30 miles above Calcutta. Patna is still a market for grain, but the East Indian Railway has robbed it of much of its importance. RĀNĪGANJ, ASANSOL, GĪRĪDĪH, JHERRĪĀ, and BARĀKAR are the centres of the coal trade. Calcutta, with its suburbs of HOWRAH, GARDEN REACH, and CHITPUR, is the centre of the commercial and industrial activities of the Province.

The Bengal Chamber of Commerce was founded in 1834, and represents all the large commercial interests of Calcutta. The Bengal National Chamber of Commerce and the Calcutta Trades Association have been formed to protect the interests of native merchants and of the retail trading community. The affairs of the Calcutta and Chittagong ports are administered by Port Trusts.

Broadly stated, the imports into Calcutta represent the convergence of the products of the country to the chief seaport for shipment overseas, and the exports from Calcutta the distribution inland of foreign imports; the principal articles of export and import are thus the same as have already been enumerated for the Province as a whole.

The registration of internal trade is defective, except for Calcutta, and complete returns exist only for rail-borne traffic. The Province is divided for registration purposes into eight blocks. The articles most largely exported from the Eastern block are jute, grain and pulses, timber, kerosene oil, and fodder; from the Northern block jute, grain and pulses, tobacco, and tea; from the Dacca\* block jute; and from Bihār grain, pulses, oilseeds, stone, and lime. All the blocks obtain their piece-goods from Calcutta. Calcutta receives rice from East and West Bengal; coal from West Bengal and Chotā Nāgpur; jute from Dacca\* and East and North Bengal; timber from East Bengal; grain and pulses from West, East, and North Bengal, Dacca\*, and Bihār; and oilseeds, opium, and indigo from Bihār. West Bengal imports salt, oilcake, wrought iron and steel, and sugar from Calcutta; coal and timber from Chotā Nāgpur; and grain, stone, lime, and oilseeds from Bihār. East Bengal draws its supplies of salt and railway material from Calcutta; coal from West Bengal and from Chotā Nāgpur; and jute and rice from North Bengal. Bihār imports coal and timber from Chotā Nāgpur.

The railways, rivers, canals, and roads carry country produce to the ports for export, and distribute the imports: the main routes of traffic will be described under the head of Communications. Calcutta,

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oilseeds, grain and pulses, hides and skins, and wool manufactures, and to which are sent cotton piece-goods, gunny-bags and cloth, metals, and sugar. From Assam, Calcutta receives tea, oilseeds, grain and pulses, and stone and lime, and sends in return cotton piece-goods, metals and manufactures of metals, oils (mostly rape and mustard), and salt. Excluding the trade with Calcutta, the imports of Bengal consist mainly of the staple products of the United Provinces, Assam, and the Central Provinces, and the exports consist mainly of grain and pulses, coal, jute, gunny-bags and cloth, spices, and sugar.

Of the foreign trade by far the largest part is with countries in Europe; and of this the greatest share is with the United Kingdom, from which two-thirds of the imports come. Kerosene oil is imported from Russia, sugar and piece-goods from Germany, wrought iron and steel from Belgium, and sugar from Austria-Hungary and from the Straits. The United Kingdom takes one-third of the total exports, and Germany as much as all the other countries combined.

The foreign land trade is insignificant except with Nepāl, which absorbs about 92 per cent. of the total. Tibet still presents a practically closed door to the Indian trader, and with Sikkim and Bhutān the trade is trifling. About half of the imports consists of grain and pulses (largely rice); the exports are cotton yarn and piece-goods (European and Indian), metals, provisions, and salt.

The total length<sup>1</sup> of the railways in the Province in 1904 was 4,578.4 miles, of which the state owned 3,894.8 miles, 971.3 being worked by the state and 2,923.5 by companies, while **Communications.** 616.7 miles belonged to assisted companies, 33.3 miles to an unassisted company, and 33.6 to Native States; no lines are owned by guaranteed companies. Of the total length, 2,932.6 miles belonged to inter-Provincial railways; these are the East Indian, Bengal-Nāgpur, Assam-Bengal, and Bengal and North-Western Railways.

The East Indian Railway, a broad-gauge line owned by the state, the length of which in Bengal is 1,211.6 miles, connects Bengal with the

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As a result of the partition the following railways now lie entirely outside the Province: the Assam-Bengal (193.9 miles), Bengal-Duārs (152.3), Mymensingh-Jamālpur-Jagannāthganj (51.4), and Noākhāli (34.9) Railways. The Eastern Bengal State Railway now lies partly outside Bengal, 231.6 miles being included in the Province and 739.6 miles in Eastern Bengal and Assam. The length of the Bengal-Nāgpur Railway within Bengal has at the same time been increased by 79.2 miles.

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Eastern Bengal State Railway at Katihār, and with the East Indian Railway by ferries across the Ganges.

The railways lying wholly within Bengal are the Eastern Bengal State (including the former Bengal Central), the Noākhālī<sup>1</sup> (Bengal), the Mymensingh-Jamālpur-Jagannāthganj<sup>1</sup>, the South Bihār, the Bengal-Duārs, the Calcutta Port Commissioners', the Darjeeling-Himālayan, the Deogarh, the Tārakeswar and the Cooch Behār Railways, and the Howrah-Amtā, Howrah-Sheakhāla, Tārakeswar-Magrā, Bakhtiyārpur-Bihār, Bārāsāt-Basīrhāt, and Baripādā light railways.

The Eastern Bengal State Railway is of different gauges: 278.7 miles on the 5 feet 6 inch gauge and 20.3 miles on the 2 feet 6 inch gauge are on the south of the Padmā, and north of that river 637.6 miles are on the metre-gauge and 34.8 miles on the 2 feet 6 inch gauge. The Cooch Behār State Railway, on the 2 feet 6 inch gauge, which is also on the north of the same river, forms part of the Eastern Bengal State Railway system. The terminus is at Sealdah in Calcutta. The main line runs north to the foot of the Himālayas at Silīgūrī, crossing the Padmā by a ferry at Sāra\*. From Porādaha a branch line runs east to the steamer terminus at Goalundo\*; and from Pārvatīpur\*, north of the Ganges, branches run east to Dhubri in Assam and west to Katihār, where a junction is effected with the Bengal and North-Western Railway. Branch lines run south from Calcutta to Diamond Harbour, Budge-Budge, and Port Canning; and an isolated branch from Nārāyanganj\* runs north to Dacca\* and Mymensingh\*, and thence to Jagannāthganj\* via Singhāni. This railway brings to Calcutta large quantities of jute and tea from North Bengal and of jute from East Bengal.

The Bengal Central Railway, on the 5 feet 6 inch gauge, is a state line formerly worked by a company, which has been worked by the Eastern Bengal State Railway since July 1, 1905, the date of the termination of the contract between the Secretary of State for India and the company. It runs north-east from its terminus at Sealdah to Khulnā, with a branch from Bangaon to Rānāghāt, and carries a large jute traffic. The Bengal-Duārs Railway on the metre-gauge traverses Jalpaigūrī District\*, and is connected with the Eastern Bengal State Railway system at Jalpaigūrī\* and Lālmanir Hāt\*. It serves the sub-Himālayan tea district known as the Duārs. The Calcutta Port Commissioners' Railway on the 5 feet 6 inch gauge connects the Eastern Bengal State Railway north of Calcutta with the docks; a short branch runs on the Howrah bank from Telkal Ghāt to Shalimār. The Deogarh Railway is a metre-gauge line of short length running from Baidyanāth, a station on the East Indian Railway, to Deogarh, a popular place of Hindu pilgrimage. The Darjeeling-Himālayan Railway, which is

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length in the Province of 390 miles. The Orissa trunk road runs from Calcutta via Cuttack to the Madras border, the length being 320 miles. The Rāniganj-Midnapore road has a length of 101 miles, and the Barākar-Rānchī road of 120 miles. The Ganges-Darjeeling road runs from near Katihār to Siliguri for 124 miles. These roads are metalled. An important unmetalled road runs from Chittagong\* to Daudkāndi\*, a distance of 124 miles.

In the alluvial soil of Bengal proper it is very difficult to make good roads. The roads are raised by embankments above the level of the swamps with earth dug from the roadsides, but, stone not being available locally, very few of them can be metalled. Those which are metalled are soled with brick and dressed with broken brick. Stone is employed only in Calcutta and Chittagong\*, to which ports ships bring stone in ballast. Elsewhere in the Province laterite and *kankar* make excellent road material, and stone also is sometimes available. The construction of railways has diminished the importance of the trunk roads, some of which have consequently been made over to District boards for maintenance. On the other hand, the increased facilities afforded by the railways for the export and import of goods have created a demand for numerous feeder-roads.

The ordinary country cart of Bengal consists of a framework of bamboo, supported on two wooden wheels and a wooden axle. The body is in the shape of a triangle tapering down towards the front, and it is drawn by a pair of bullocks which are yoked to a cross-bar about 4 feet long. The felloes of the wheels are made of six segments of *sissū* wood, and there are six spokes arranged in parallel pairs. The *ekkā* is a light two-wheeled trap, drawn by a single pony. The body consists of a framework covered with coarse cloth with *newār* tape woven across. It can be used over the most uneven ground. The *manjholī* and the *champanī* are both drawn by a pair of bullocks. The former is similar to an *ekkā*, but the yoke consists of a beam of wood at right angles to another long beam projecting from the body of the cart. The *champanī* is a two-wheeled, and sometimes a four-wheeled, light carriage similar in construction to an omnibus. It has, however, no benches within to sit on, and the travellers squat or lie down as they please. It has a pole with a cross-bar, which rests on the necks of the bullocks which drag it.

On the hill roads of Darjeeling a very heavy strongly made cart is used. In Bihār a distinction is made between the large heavy country cart or *chakrā* and the *sāgar*, which is rougher, lighter, and cheaper, but otherwise very similar. In Chotā Nāgpur and the Orissa Tributary States, where the *sāgar* is also in use among the villagers, the wheels do not exceed 2½ feet in diameter, and are made by joining three pieces of solid wood hewn out of a mango or *manjā* tree; being low and narrow, it is well suited for rough work and bad roads. The Oriyā cart is

length in the Province of 390 miles. The Orissa trunk road runs from Calcutta via Cuttack to the Madras border, the length being 320 miles. The Rāniganj-Midnapore road has a length of 101 miles, and the Barākar-Rānchī road of 120 miles. The Ganges-Darjeeling road runs from near Katihār to Siliguri for 124 miles. These roads are metalled. An important unmetalled road runs from Chittagong\* to Daudkāndi\*, a distance of 124 miles.

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The ordinary country cart of Bengal consists of a framework of bamboo, supported on two wooden wheels and a wooden axle. The body is in the shape of a triangle tapering down towards the front, and it is drawn by a pair of bullocks which are yoked to a cross-bar about 4 feet long. The felloes of the wheels are made of six segments of *sissū* wood, and there are six spokes arranged in parallel pairs. The *ekkā* is a light two-wheeled trap, drawn by a single pony. The body consists of a framework covered with coarse cloth with *newār* tape woven across. It can be used over the most uneven ground. The *manjholī* and the *champanī* are both drawn by a pair of bullocks. The former is similar to an *ekkā*, but the yoke consists of a beam of wood at right angles to another long beam projecting from the body of the cart. The *champanī* is a two-wheeled, and sometimes a four-wheeled, light carriage similar in construction to an omnibus. It has, however, no benches within to sit on, and the travellers squat or lie down as they please. It has a pole with a cross-bar, which rests on the necks of the bullocks which drag it.

On the hill roads of Darjeeling a very heavy strongly made cart is used. In Bihār a distinction is made between the large heavy country cart or *chakrā* and the *sāgar*, which is rougher, lighter, and cheaper, but otherwise very similar. In Chotā Nāgpur and the Orissa Tributary States, where the *sāgar* is also in use among the villagers, the wheels do not exceed 2½ feet in diameter, and are made by joining three pieces of solid wood hewn out of a mango or *manjā* tree; being low and narrow, it is well suited for rough work and bad roads. The Oriyā cart is



way has killed the traffic on them, and in 1903-4 they carried cargo valued at only 16 lakhs, the tolls amounting to Rs. 22,708.

Finally, the NADIĀ RIVERS are a group of spill channels of the Ganges, which are kept open by artificial means in the dry season, and are navigable for 472 miles. In 1903-4 the cargo carried by them was valued at 205 lakhs; the gross revenue amounted to Rs. 88,402, but there was a loss of Rs. 15,986 on the year's working.

In the east of the Province the rivers and estuaries carry the bulk of the country trade, and the roads are little used, especially in the rainy season. The chief waterways are the GANGES and BRAHMAPUTRA, and their joint estuary the MEGHNĀ, which are navigable throughout their course in Bengal by river steamers and large country boats. Both rivers throw off in their lower reaches innumerable distributaries, which intersect the country in every direction and enable boats to find their way to every village and almost to the door of every cottage. The eastern deltaic offshoots of the Ganges feed the Calcutta and Eastern Canals. The GANDAK in North Bihār still carries a heavy traffic, and the MAHĀNADĪ and BRĀHMANĪ tap the hinterland of Orissa.

Weekly steamers ply to Chittagong\* and to Chāndbāli on the Orissa coast; small steamers also run from Chittagong\* to Cox's Bāzār\*. Goalundo\*, at the confluence of the Padmā and Brahmaputra rivers, is the terminus of a great steamer traffic up the Ganges to Ghāzīpur, and up the Brahmaputra to Dibrugarh. A daily service to Nārāyanganj\* connects Dacca\* with Calcutta, while mail steamers to Chāndpur\* link up the Assam-Bengal with the Eastern Bengal State Railway. Steamers ply daily from Calcutta through the Sundarbans to Assam, via Barisāl\*, Chāndpur\*, and Nārāyanganj\*. On the Hooghly river steamers run daily up to Kālāna, and down to Budge-Budge, Ulubāria, and Ghātāl. On the Padmā steamers ply between Dāmukdia Ghāt and Rāmpur Boāliā\* and Godāgāri\*, with a continuation to English Bāzār (Mālda)\*, and between English Bāzār\* and Sultānganj. From Khulnā steamers run to Barisāl\*, Noākhālī\*, Nārāyanganj\*, Mādārīpur\* and other places, and there is a daily service on the Brahmaputra from Goalundo\* to Phulchari\*. Backergunge District\* is also well served by steamers.

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Bengal landowners had to maintain. A tax, known as the Dāk cess, was levied, and expended in maintaining postal communications required for administrative purposes, the up-keep of which was not warranted on commercial principles. The District Magistrate decided what communications were to be opened and maintained, but their management was in the hands of the Postal department. The expenditure from this cess, which was fixed for each District according to its requirements, averaged 3.58 lakhs annually for the five years ending in 1903-4. In 1903-4 the offices numbered 292, the length worked was 11,832 miles, and the expenditure amounted to Rs. 3,53,384. In 1906 the tax was abolished, and the District post was amalgamated with the Imperial system.

	1880-1.	1890-1.	1900-1.	1903-4.
Number of post offices and letter boxes .	4,671	8,089	9,927	11,204
Number of miles of postal communication . . .	21,498	25,672	27,686	28,347
Total number of postal articles delivered (in thousands):—				
Letters . . .	28,550	37,636	57,538	56,495
Postcards . . .	3,433	24,922	53,678	64,307
Packets . . .	382	2,524	6,747	4,803
Newspapers . .	2,229	5,394	9,388	10,248
Parcels . . .	213	407	804	1,182
	Rs. in thousands.	Rs. in thousands.	Rs. in thousands.	Rs. in thousands.
Value of stamps sold to the public . .	11,91	12,53	31,35	36,16
Value of money orders issued . . .	1,20,24	5,08,02	7,99,03	8,81,87
Total amount of savings bank deposits .	..	1,54,46	2,93,62	3,39,80

In an agricultural country like Bengal the failure of the crops must always cause considerable distress, the degree of which varies with the nature and extent of the failure, the material condition of the people, and their character, and lastly the accessibility or otherwise of the tract affected.

#### Famine.

The great cause of deficient harvests is insufficient or badly distributed rainfall. Sometimes much damage is done by floods, and sometimes, though more rarely, by blight or locusts; but in such cases the area affected is generally limited.

The crop which is most sensitive to a short or badly distributed rainfall is the winter rice, which requires copious showers in May and a punctual commencement of the monsoon, but is especially dependent on the continuance of the rainfall throughout September and the early days of October; it is this crop which is most liable to fail in adverse

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Nāgpur is a sparsely populated region; inhabited by wild tribes; and its liability to famine is due mainly to its inaccessibility, which makes it difficult to import food-grains, and to the suspicious and restless nature of the ignorant aborigines, who shun relief works as they would the plague.

The danger of widespread famine is gradually being reduced, owing to the improvement in the material condition of the people, the growing demand for labour in the coal-mines, jute-mills, and other non-agricultural undertakings, the great improvement that has been made in communications, and especially the rapid growth of railways, which now tap nearly every District in the Province, and the construction of protective canals in the tracts where the danger of famine due to insufficient rainfall is greatest. In the whole Province it is estimated that an area of 74,500 square miles is liable to famine; and of this area 28,500 square miles are in the sub-province of Bihār, 27,000 in Chotā Nāgpur, 14,500 in Bengal proper, and 4,500 in Orissa. The population of this area is 29,000,000; and if all these tracts were simultaneously affected by severe famine, it might be necessary to provide relief for 2,000,000 persons.

The first great famine of which we have any trustworthy record is that which devastated the Province in 1769-70, when Bengal, though under British control, was still under native administration. Eastern Bengal alone escaped, and, except for the importation of a small quantity of rice from this favoured tract, it does not appear that any public measures for relief were taken. One-third of the population of Bengal is believed to have perished in this terrible catastrophe. The next really serious scarcity in Bengal was the memorable Orissa famine of 1865-7. The full extent of the crop failure consequent on the scanty rainfall of 1865 and the exhaustion of the local food supplies was not realized by the authorities in time; and when at last, in June, 1866, an effort was made to provide the starving people with food, the south-west monsoon prevented the ships, lying laden with grain in the port of Calcutta, from reaching the stricken people<sup>1</sup>. It is said that a quarter of the population died of starvation and of the diseases which resulted. This disaster, appalling as it was, had one good result—it led to a firm determination to prevent all similar occurrences in future, and from that time dates the earnest watchfulness which has never since been relaxed. At the next serious crop failure in 1874 scarcity prevailed chiefly in North Bihār and also, in a lesser degree, in South Bihār and North Bengal. On this occasion relief measures were undertaken in ample time, and all serious loss of life was prevented. The defect, if any, in the administration of this famine was that money was expended too

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The control of all matters connected with the collection of the revenue and the administration of the land is vested in the Board of Revenue, which was constituted by Regulation III of 1822. There are two members, one of whom deals with land revenue, surveys and settlements, land registration, the management of wards' estates, the collection of cesses, &c., and the other with miscellaneous revenue, including excise, opium, income-tax, salt, customs, and the like. Each member is vested with the full powers of the Board in respect of his own department, and can act for his colleague if the latter is absent.

For administrative purposes Bengal is divided into nine Divisions, each of which is superintended by a Commissioner. Of these, five—the Burdwān, Presidency, Rājshāhi\*, Dacca\*, and Chittagong\* Divisions—lie within the limits of Bengal proper; two—Patna and Bhāgalpur—make up the sub-province of Bihār, while Orissa and Chotā Nāgpur each forms a separate Commissionership. The average area<sup>1</sup> of a Commissioner's Division is rather more than 17,000 square miles, and the average population is a little more than 8 millions. The Chotā Nāgpur Division with 27,000 square miles is the largest, while the most populous is the Patna Division with 15½ millions, or about the population of the Bombay Presidency, excluding Sindh. The Commissioner exercises a general control over the conduct of affairs within his Division. He is responsible for seeing that the local officers duly

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The Magistrate-Collector is assisted in the criminal and revenue administration of the District by a subordinate staff—a Joint-Magistrate, Deputy-Magistrate-Collectors, Assistant Magistrate-Collectors, and Sub-Deputy Magistrate-Collectors. Joint-Magistrates and Assistant Magistrates are junior officers of the Indian Civil Service ; the other officials are recruited in India, and are members of the Provincial or the Subordinate civil service. All these officials are stationed either at District or at subdivisional head-quarters.

The village watch are paid from taxation assessed and collected in the villages by the *panchāyats*, who represent all that remains in Bengal of village autonomy. These *panchāyats* assist in the registration of vital statistics ; and recently, in order to develop the system of village government, it has been decided that the presidents of the *panchāyats* are to be *ex-officio* visitors of primary schools aided from public funds or under public management, and also of pounds, public ferries, and public *sarais* in their Unions. In some Districts the presidents have also been granted certain magisterial powers. In Chotā Nāgpur village communities are still to be found, and some account of the system is given in the article on the MUNDĀ tribe.

The following are the Native States under the control of, or in political relations with, the Government of Bengal<sup>1</sup> :—

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which, under his son Nar Nārāyan, extended from the Mahānandā as far east as Central Assam. On Nar Nārāyan's death the kingdom was divided into two parts, and only the western portion remained in the possession of the ancestors of the present Mahārājā, who accepted the Muhammadans as their overlords. Their power gradually declined, and from time to time they were shorn of outlying parts of their dominions. Early in the eighteenth century the Bhotiās began to interfere, and by 1772 they had taken possession of the Rājā and of his capital. British aid was then sought, and, in consideration of the cession in perpetuity of half the revenues as then ascertained, the Bhotiās were driven out. The Mahārājā administers the State with the assistance of a council, of which he is the president, and which includes the Superintendent of the State, a British officer, who is vice-president, and two State officials—the Dīwān, who is revenue member, and the Civil and Sessions Judge, who is the judicial member. The executive control is vested in the Faujdāri Ahlkār, who corresponds to the Magistrate of a British District, and is subordinate to the Superintendent of the State. The Civil and Sessions Judge occupies much the same position as the corresponding officer in Bengal regulation Districts. Sentences of death require the confirmation of the Mahārājā. The budget is passed by the Mahārājā, and does not need the sanction of any other authority; but a general control over the affairs of the State is exercised by the Government of Bengal in the Political department.

Hill Tippera\* lies to the south of Tippera District\* and, like Cooch Behār, represents the last fragment of a once powerful kingdom, which formerly extended far into the plains of East Bengal and South Assam, and which long bade defiance to the Muhammadan Nawābs<sup>1</sup>. The Tippera kings were gradually deprived of their rule in the plains, and at the time of the acquisition of Bengal by the East India Company they exercised sovereign powers only in the hill tract now ruled by them. The Rājā, however, derives the greater part of his income from certain large estates in British territory which he holds as *zamīndār*. No formal treaty regulates the relations between the British Government and the Rājā of Hill Tippera\*, but the succession of a new Rājā has always been subject to recognition and investiture by the British authorities. No control was exercised in respect of the internal administration until the year 1871, when an English officer was appointed to reside in the State as Political Agent, to protect British interests and advise the Rājā. This officer was subsequently withdrawn, and his duties now devolve on the Magistrate and Collector of Tippera District\*, who is *ex-officio* Political Agent for Hill Tippera\*. He is

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of Nāgpur, and were ceded under the provisional agreement concluded with Mādhuji Bhonsla in 1818. The tribute was then fixed at a lower rate than that levied under the Marāthā government, and the settlements with the chiefs were made for a limited period. Fresh settlements for a nominal term of five years were made in 1827, but were not renewed until 1875, when they were made for a period of twenty years. The latter were renewed in 1889, when the tribute was fixed for a further period of twenty years, and the States having in the meantime been declared by the Secretary of State to be outside British India, the relations between them and the British Government were defined in their new *sanads*. The chiefs of these States are under the control of the Commissioner of Chotā Nāgpur. They are permitted to levy rents and certain other customary dues from their subjects. They are empowered to pass sentences of imprisonment up to five years and of fine to the extent of Rs. 200; but sentences of imprisonment for more than two years, or of fine exceeding Rs. 50, require the confirmation of the Commissioner. Heinous offences calling for heavier punishment are dealt with by the Deputy-Commissioners of Rānchī, Palāmau, and Singhbhūm, who exercise the powers of District Magistrates and Assistant Sessions Judges; the Commissioner and Judicial Commissioner in respect of such cases occupy the position of a Sessions Court, while the functions of a High Court are performed by the Government of Bengal.

The two Political States of Saraikelā and Kharsāwān lie in Singhbhūm, and control over them is exercised by the Commissioner through the Deputy-Commissioner of that District. They were claimed as feudatories by the Rājā of Porāhāt, whose territory was confiscated in 1857 for rebellion, but was in 1895 restored as a revenue-free *samindāri* to his son. It is believed that engagements were taken from the chiefs of these States, but they are not now forthcoming. They have now, however, received *sanads* similar to those described above, and their general position is much the same as that of the Rājās of the Tributary States, except that they do not pay tribute.

The laws in force in Bengal consist of (1) Acts of Parliament relating to India; (2) certain still unrepealed Regulations of what was known as the Bengal Code, framed by the Executive Government before the creation of the legislative bodies; (3) Acts of the Governor-General's Legislative Council, now constituted under the Indian Councils Acts, 1861 and 1892; (4) Regulations for certain backward tracts issued by the Government of India under the Statute 33 Vict., c. 3; and lastly, (5) Acts of the Bengal Legislative Council. The Bengal Council came into existence on January 18, 1862, under a proclamation by the Governor-General-in-Council which extended the provisions of the Indian Councils Act,

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Appeals from Munsifs lie to the District Judge, or to the Subordinate Judge, if the High Court, with the sanction of the Local Government, so direct. Appeals from Subordinate Judges lie to the District Judge, except when the value of the subject-matter exceeds Rs. 5,000, in which case the appeal lies to the High Court. Appeals from the decrees and orders of District and Additional Judges lie to the High Court. An appeal may, subject to certain restrictions, be preferred from the High Court to the Privy Council in England, if the amount in dispute exceeds Rs. 10,000.

The powers of Courts of Small Causes are regulated by Act IX of 1887. Subject to certain exceptions, their jurisdiction extends to all suits of a civil nature of which the value does not exceed Rs. 500, a limit which may be increased to Rs. 1,000 by a special order of the Local Government. The Local Government is empowered, under Act XII of 1887, to invest Subordinate Judges and Munsifs with Small Cause Court jurisdiction for the trial of cases not exceeding Rs. 500 in value in the case of Subordinate Judges, and Rs. 100 in the case of Munsifs. In civil suits above a certain limit Calcutta is under the original jurisdiction of the High Court. The Small Cause Court of Calcutta has a purely local jurisdiction and is regulated by a special Act.

The principal statistics<sup>1</sup> relating to civil justice are embodied in the statement below :—

Class of suits.	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.
Suits for money and movable property	255,630	297,137	284,017	298,686
Title and other suits	35,053	63,234	76,271	76,350
Rent suits	180,650	247,787	286,201	339,099
Total	471,933	608,158	646,489	714,135

Criminal justice is administered by magistrates (of whom there are three classes), the Courts of Sessions, and the High Court. Subject to the maximum punishment prescribed by law for each offence, a magistrate of the first class has power to sentence offenders to imprisonment,

<sup>1</sup> The corresponding number of suits instituted in 1903 in Bengal as now constituted was :—Suits for money and movable property, 161,173; title and other suits, 46,914; rent suits, 211,783; total, 419,870.

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certain cases in which the accused are European British subjects, which may be committed for trial by magistrates in the interior. On its appellate side the High Court, by a bench of two or more Judges disposes of appeals in respect of convictions on trials before a Court of Sessions. It revises, upon reference from Sessions Judges or magistrates, the decisions of inferior courts, when in error upon points of law, deals with appeals which the Local Government may prefer against acquittals, and confirms, modifies, or annuls all sentences of death passed by Sessions Courts.

The table<sup>1</sup> below contains some of the more important statistics relating to criminal justice. During the last few years there has been a considerable increase in the number of offences against property, which is said to be due to the high price of food-grains.

	Average for ten years ending 1890.	Average for ten years ending 1900.	1901.	1903.	Percent- age of con- victions, 1903.
Number of persons tried :					
(a) For offences against person and property	89,832	95,346	99,834	98,852	38.8
(b) For other offences against the Indian Penal Code . . .	36,569	37,249	33,313	33,742	61.2
(c) For offences against special and local laws . . .	98,302	130,487	111,425	121,052	84.3
Total	224,703	263,082	244,572	253,646	63.5

The registration of assurances is effected under the same law (Act III of 1877) as in other parts of British India. The cost is met by fees levied from persons presenting documents for registration or desiring copies of registered documents, according to a scale prescribed by Government. The Registration department is presided over by an Inspector-General. The District Magistrates, who are *ex-officio* Registrars, have full powers of inspection and control over all registration offices in their Districts, and are responsible for the proper conduct of the work. At the head-quarters of each District there is a salaried officer, known as the special sub-registrar, who deals with the documents

<sup>1</sup> The following table gives the corresponding figures for 1903 for Bengal as now constituted :—

	Number of persons tried.	Percentage of con- victions.
(a) Offences against person and property . . .	68,916	40.3
(b) Other offences against the Indian Penal Code . . .	22,781	62.7
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Total	191,555	67.5

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There has been a rise on account of salaries in various departments. Exchange compensation allowance has been granted to European officials, and in several departments there has been a reorganization of establishments and a general increase of pay. During the currency of the settlement of 1884-5, an additional yearly expenditure of  $4\frac{3}{4}$  lakhs was incurred under 'judicial courts,' the result of an increase in the number of Subordinate Judges and Munsifs and of judicial establishments generally. About the same time the reorganization of the police department, in accordance with the recommendations of the Police Commission of 1891, led to an additional yearly expenditure of about 6 lakhs. In recent years the expenditure under medical has been swollen by charges incurred in connexion with the suppression of plague; but large sums have also been spent on works of general utility, such as the building of the Bhawānipur Hospital, the remodelling of the General Hospital, and the extension of the Medical College in Calcutta. The increased contributions to Local funds were made partly to aid them in the arrangements they had to carry out for the prevention of plague or in the repairs of damages caused by the disastrous earthquake of 1897, and partly to assist them to provide feeder-roads for railways and improve communications generally. The ordinary income of the District boards is not capable of much expansion, and those bodies have to rely on subventions from Government to meet their growing needs, while the amount of aid which the latter is able to render varies with its own financial position<sup>1</sup>.

The transfer of a number of Districts to Eastern Bengal and Assam has reduced the Provincial revenues to about 463 lakhs (estimate for 1906-7), to which is added a fixed contribution of 11 lakhs from Imperial funds.

The current land revenue demand<sup>2</sup> for the year 1903-4 was more than 4 crores, or one-fifth of the principal heads of receipts in the

Province. Four-fifths of the land revenue was permanently settled at the end of the eighteenth century; and since that date the *zamīndārs* and their tenants have shared between them the entire benefit of the enormous increase in the value of the produce of land which has taken place, including that of waste land since brought under cultivation. The result is that Bengal pays a lower

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assessment bore either to the produce of the land, or to the rental received by the *samīndārs*. It was believed at the time, however, that it amounted to 90 per cent. of the gross rental; and Sir John Shore estimated that, of the gross produce of the soil, the British Government received 45 per cent., the *samīndārs* and their under-renters 15 per cent., and the cultivators 40 per cent.

The increase in the revenue of the permanently settled estates, from 286 lakhs in 1790-1 to 323 lakhs in 1903-4, was due to the resumption and assessment, during the first half of the nineteenth century, of a large number of estates which had been claimed as free of revenue. During the same period, however, the gross rental of these estates has risen from 318 to 1472 lakhs (assuming that the assessment of 1790 was equivalent to 90 per cent. of the gross rental); in other words, the Government share of the rental has fallen during this period from 90 to 24 per cent.

The operations of the Permanent Settlement did not include the unsettled part of CHITTAGONG\*, the KOLHĀN estate in Singhbhūm and other tracts in Chotā Nāgpur, the DĀMAN-I-KOH in the Santāl Parganas, or the SUNDARBANS. These tracts are temporarily settled, as are also many alluvial islands and estates which have escheated, or been purchased from time to time by the Government at revenue sales. Tracts acquired since 1793 are also temporarily settled: namely, the sub-province of Orissa, acquired from the Marāthās in 1803; the Khurdā estate in Purī, confiscated in 1804; the District of Darjeeling, acquired partly from Sikkim in 1835 and 1850, and partly from Bhutān in 1864; the estates of Bānki and Angul, confiscated in 1839 and 1847; and the Western Duārs\*, taken from Bhutān in 1864. Cāchār and the Assam Valley proper were acquired on various dates between 1826 and 1842; but in 1874 they and the permanently settled Districts of Sylhet and Goālpāra were separated from Bengal and formed into a separate administration. A brief review of the revenue history of the separate tracts is given below.

ORISSA was settled in 1845 at a revenue of 13.84 lakhs for a period of thirty years, which, however, was extended in consequence of the famine of 1866. In 1897 it was resettled for 21.05 lakhs, or 54 per cent. of the 'assets,' which amounted to 38.68 lakhs. The incidence of the new revenue is Rs. 1-1-10 per acre, and the period of settlement thirty years. The KHURDĀ estate was settled *ryotwāri* in 1875 for 2.68 lakhs. In 1897 the estate was resettled for fifteen years at a revenue of 3.46 lakhs, the increase being effected by an enhancement of 3 annas in the rupee. The incidence of rent per acre is Rs. 1-10-6.

The resettlement of the PALĀMAU estate in 1896 for a term of fifteen years resulted in the increase of the rental from Rs. 58,000 to Rs. 74,000, mainly on the ground of extension of cultivation; the average rate of

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direct by Government. Only 474 estates are large properties of over 20,000 acres, while 90 per cent. of the total number comprise less than 500 acres apiece.

In addition, 56,000 revenue-free estates and 119,000 rent-free holdings are assessed to road and public works cesses. At the time of the Permanent Settlement large areas were claimed revenue-free, and the authority to scrutinize such revenue-free grants, and, if invalid, to resume them, was specially reserved. They were divided into two classes, according as they had been granted by the Mughal emperor direct, or by the officials of the empire. The former were recognized as valid if the holder could prove that his grant was hereditary and that he was in possession. The latter were accepted as valid if dated prior to 1765; all grants of a subsequent date were resumed, but those given between 1765 and 1790 were assessed at privileged rates. All rent-free grants made by *zamīndārs* after 1790 were invalidated, and *zamīndārs* were authorized to nullify their own grants. Resumption proceedings were systematically undertaken by special Commissioners between the years 1830 and 1850, when some thousands of estates were added to the revenue-roll. The revenue-free estates are those which escaped resumption during these proceedings, and their number has been swelled by redemption of the land revenue, which is permitted in the case of very petty estates. The rent-free holdings are small areas which were assigned in former times by *zamīndārs* for religious or charitable purposes.

The land revenue is realized with remarkable punctuality. In 1903-4 no less than 97·8 per cent. of the current demand was realized within the year, the percentages in the three classes of permanently settled, temporarily settled, and directly managed estates being 98·9, 96·7, and 89·3 respectively. The revenue of estates belonging to the first two classes is realized under the Sale Law, which renders an estate liable to summary auction sale if the revenue is not paid in full by a fixed date. The revenue is payable by instalments which have been fixed for each District with reference to the date of the harvests, so that the instalments may be paid from the sale proceeds of the surplus produce. Arrears of rent in estates under direct management are recovered under the 'certificate procedure': in case of default the Collector certifies the amount due, and his certificate has the force and effect of a decree of court, and is executed accordingly.

In early Mughal times the only *zamīndārs* recognized were the territorial chiefs, who were left in possession on grounds of policy, on condition that they agreed to pay into the imperial treasury a certain proportion of the revenue collected from their villages; with this exception, the ordinary revenue system was to collect a share of the produce direct from the cultivators through their headmen. With the

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Tenures are distinguishable into four classes according to their origin. Many ancient tenures existed before the creation of the *zamīndāris* to which they are now subordinate. At the time of the Permanent Settlement, many of these tenures, known as *taluks*, were separated from the *zamīndāris*, and formed into distinct estates, paying revenue direct to Government. A large number of the smaller tenures, however, remained subordinate to the *zamīndārs*. A second class of tenures was created by the *zamīndārs*, with a view to protect their property from the ruin which involved so many estates immediately after the Permanent Settlement. The *patnī taluk*, which originated in Burdwān and has since spread over other parts of Bengal, is an estate within an estate, the rent being fixed in perpetuity and the tenure being saleable by the Collector at the *zamīndār's* instance for arrears, precisely in the same way as the parent estate. In some parts the process of sub-infeudation has proceeded much farther ; the *patnīdār* has given his lands in permanent lease to *dar-patnīdārs*, and the *dar-patnīdārs* have done the same to *sī-patnīdārs*.

The reclaiming tenure is a bait which tempts the petty capitalist to spend his resources on the land. It is found all along the coast, where the low mud flats are being gradually raised by deposits of silt. The great rivers discharge into the Bay of Bengal an immense mass of sand, clay, and vegetable débris, which is again carried inland by the action of the tide. The coast-line is ever encroaching on the Bay, and as the deposits rise above water-level they become clothed with mangrove jungle, and if left to themselves would in time rise to high spring-tide level. But the impatience of the reclaimer forestalls this natural process, and soon after the surface emerges, an earthen embankment is thrown round it to exclude the salt tidal water, and the newly-formed islet is cultivated. The natural growth of the surface is thus arrested, and the deposit of silt is confined to the beds of the tidal channels, which gradually rise until they threaten to overwhelm the new reclamation. Perpetual leases at low rents are needed to persuade the capitalist to undertake the heavy initial and recurring expenditure required for the protection of such reclamations, and similar leases are often granted in the case of waste land when heavy expenditure has to be incurred in felling dense forests and undergrowth.

There is a fourth class of tenures, which is probably the most numerous of all, and which may be described as the land-jobbing tenure. This class is to be distinguished from the reclamation leases described above, though the nomenclature is generally the same. It is found in

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Decennial Settlement had been concluded were severe at the time, while the proprietors were unaccustomed to the punctual payments necessary to protect their estates from sale. The consequence was that many proprietors defaulted and their estates were sold, and the attention of Government was for twenty years concentrated on efforts to realize the revenue with punctuality. The *zamīndārs* complained of the difficulty they experienced in collecting rents punctually from their tenants, and in 1799 special powers were given them to seize the person of a defaulting ryot and to distrain on his crops summarily. These powers were grossly abused and led to much oppression, but it was not until 1859 that a remedy was found. Act X of that year conferred on the ryots a right of occupancy in lands cultivated by them for twelve years, and protected occupancy ryots from enhancement of rent except on certain specified grounds; the landlord's power of distraint was also restricted. This Act failed, however, to give the needed protection to the tenantry; and after prolonged discussion a new Tenancy Act was passed in 1885, which provided that every ryot who has held any land in a village for twelve years acquires thereby a right of occupancy in all the land he may hold in the village. The result is that a proportion of all the ryots in the Province, varying from four-fifths to nine-tenths, have occupancy rights in their lands. In the case of such ryots, enhancement by contract is limited to an addition once in fifteen years of one-eighth to the previous rent, and a civil court can enhance the rent only on certain specified grounds, and even then only once in fifteen years. Whether such holdings are transferable or not depends on local custom. A small number of ryots hold at fixed rates of rent, and the remainder are without a right of occupancy. Even the latter, however, cannot be ejected except in execution of the decree of a competent court, nor can their rents be enhanced at shorter intervals than five years.

Produce rents are to be found all over the Province, and are especially common in South Bihār, where landlords maintain irrigation works or embankments. Sometimes the value of the standing crop is estimated, and the share to be paid as rent is fixed accordingly; sometimes the grain is divided on the threshing-floor. The landlord generally takes about half the crop, exclusive of the straw.

No attempt has yet been made to check the transfer of land by ryots, except in Chotā Nāgpur, the Santāl Parganas, Angul, and the Kālimpong Government estate, where transfers to non-agriculturists, or, in some cases, to any outsider, are forbidden, and where the prohibition is strictly enforced at the time of settlement of the rents.

In the Bengal Tenancy Act of 1885 power was taken by Government to order a survey and record-of-rights in any local area; such operations have since been completed in the four North Bihār Districts of Sāran, Champāran, Muzaffarpur, and Darbhanga, and are in progress in

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export principally to China and the Straits Settlements, and 'excise opium' for consumption in India. The difference lies in the consistency and size of the cakes and the method of packing. 'Provision opium' is dispatched to the warehouses of the Board of Revenue in Calcutta, where it is sold at public auction, the number of chests to be offered for sale during the year being fixed by the Government of India, with reference to the quantity manufactured and the stock held in reserve. During the period 1881-90, a yearly average of 54,664 chests (each containing 40 cakes weighing about 140 lb.) was exported from Calcutta, and 43,164 chests during the succeeding decade. In 1900-1 47,950 chests, and in 1903-4 48,218 chests, were shipped, and the normal sale standard is now 48,000 chests per annum. The gross value of the chests sold averaged about  $6\frac{1}{2}$  crores between the years 1881 and 1890, and a little over 5 crores between 1891 and 1900. In 1900-1 it amounted to about  $6\frac{1}{3}$  crores, and in 1903-4 to just over 7 crores. 'Excise opium' is supplied to all Government treasuries for sale to licensed vendors. The price, which is fixed by Government, varies in different parts of the Province. At the present time it ranges from Rs. 28 to Rs. 31 per seer in Bengal proper; in Orissa it is Rs. 33; and in the Patna Division, where the danger of smuggling is greatest, it is only Rs. 17 per seer. With the retail sale of the drug to the actual consumers the Opium department has no concern; this is under the control of the Commissioner of Excise, as described farther on.

The net yearly revenue of the Opium department averaged  $4\frac{1}{4}$  crores from 1881 to 1890; from 1891 to 1900 it was a little over 3 crores; in 1901 it amounted to about 4 crores, and in 1903 to 3.98 crores. The revenue varies from year to year according to the quantity of opium available for sale and the price realized for it. A standard quantity to be produced yearly is periodically fixed by Government, and the maximum area to be cultivated is calculated accordingly; but the area actually under poppy depends also on the willingness of the cultivator to grow it. The crop, though on the average a remunerative one, is very sensitive to climatic conditions, and a series of unfavourable years may create a prejudice against it. The amount realized by the sale of 'provision opium' depends partly on the quantity offered for sale, and partly on the nature of the season in China and the area under cultivation there. Differences in the rate of exchange between the two countries may have a disturbing influence upon the market, and the interest charged by the Calcutta banks also affects it.

The administration of excise, including the retail sale of opium, is vested in the Excise Commissioner, subject to the general control of the Board of Revenue. In the Districts the Collector is in charge, assisted by a Deputy-Collector (who is, in the more important Districts, a special officer) with a clerical, preventive, and, where Government

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facilities for obtaining them are allowed only in order to meet an ascertained demand, or for the prevention of illicit practices. The number of licences issued is carefully considered, and the sites for licensed shops are selected with due regard to local feeling. The fees for a licence are ordinarily settled by auction, subject to a minimum which is fixed with reference to the estimated sales at each shop and the average fees previously paid for the licence. Educated opinion is opposed to the use of stimulants, and the general feeling of the people condemns over-indulgence. The consumption has, however, increased rapidly among the educated classes, who, next to Europeans, are the chief purchasers of imported liquors, and especially of the cheap brands manufactured from German spirit and sold, under English names, in bottles with attractive labels. These brands compete with the country-made spirit in cheapness, and are believed to be stronger.

The revenue on salt is levied mainly in the shape of an import duty—formerly Rs. 2½, reduced in 1903 to Rs. 2, in 1905 to Rs. 1-8, and in 1907 to R. 1 per maund of 82 lb.—which is realized by the Customs authorities. There are also certain miscellaneous receipts, of which the most important are the rents paid for the storage of salt in Government warehouses and the fees realized upon the passes granted for its removal. The Bengal coast is unsuitable for the local manufacture of salt, by reason of the dampness of the climate and the large amount of fresh water discharged into the Bay of Bengal by the Ganges and the Brahmaputra, and the manufacture of salt in the Province has been discontinued since 1898 and is now forbidden. The quantity annually manufactured by Government and private individuals during the ten years 1881-90 averaged about 280,000 maunds, and during the succeeding seven years about 120,000 maunds. The quantity imported yearly from within India and from other countries during the periods 1881-90 and 1891-1900 averaged 9½ and 10 million maunds respectively. In 1900-1 it was about 9 million maunds, and in 1901-2 about 13½ million maunds. The average consumption of salt per head of the population during each of the four years 1880-1, 1890-1, 1900-1, and 1903-4 was 5⅓, 5½, 5⅔, and 5⅝ seers respectively. The gross revenue from this source, exclusive of miscellaneous receipts, averaged 2.18 crores between the years 1881 and 1890, and 2.59 crores between 1891 and 1900, while in 1900-1 it amounted to 2.66 crores, and in 1903-4 to 2.27 crores.

The course of the salt trade has been greatly influenced by the substitution of steamships for sailing vessels and by the improvement in the means of communication in India. The former circumstance has given a great impetus to the practice of bonding salt, as steamers are unable to waste time in port. The opening of the East Coast Railway encouraged the importation of Madras salt into Orissa, and it

facilities for obtaining them are allowed only in order to meet an ascertained demand, or for the prevention of illicit practices. The number of licences issued is carefully considered, and the sites for licensed shops are selected with due regard to local feeling. The fees for a licence are ordinarily settled by auction, subject to a minimum which is fixed with reference to the estimated sales at each shop and the average fees previously paid for the licence. Educated opinion is opposed to the use of stimulants, and the general feeling of the people condemns over-indulgence. The consumption has, however, increased rapidly among the educated classes, who, next to Europeans, are the chief purchasers of imported liquors, and especially of the cheap brands manufactured from German spirit and sold, under English names, in bottles with attractive labels. These brands compete with the country-made spirit in cheapness, and are believed to be stronger.

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The course of the salt trade has been greatly influenced by the substitution of steamships for sailing vessels and by the improvement in the means of communication in India. The former circumstance has given a great impetus to the practice of bonding salt, as steamers are unable to waste time in port. The opening of the East Coast Railway encouraged the importation of Madras salt into Orissa, and it

in charge of excise duties also. For Calcutta, which, with the town of Howrah, constitutes a separate District for income-tax purposes, there is a special Collector of Income-tax. Since the enhancement of the minimum taxable income, assessors are appointed to Divisions, and the work of assessment in the different Districts in each Division is distributed among them by the Commissioner in consultation with the District officers. The rates of pay of the assessors are Rs. 100, Rs. 90, and Rs. 80 a month. In Calcutta seven assessors are employed, who belong to two grades with pay of Rs. 250 and Rs. 200 respectively.

The net revenue derived from the tax on incomes during the five years 1886-90 averaged 37.5 lakhs. During the next ten years it averaged 45.7 lakhs, and in 1901 it amounted to 54.4 lakhs; in 1902-3 it was 56.5 lakhs, but in 1903-4 (after the increase of the minimum assessable income) it fell to 47.7 lakhs<sup>1</sup>. The incidence of the tax per head of the population during the same five periods averaged 0.06, 0.06, 0.07, 0.08, and 0.06 of a rupee, while the average number of assesseees was 109,000, 119,000, 134,000, 135,000, and 56,000, or 1.6, 1.7, 1.8, 1.8, and 0.8 per 1,000 of the population respectively.

The work of the Calcutta Custom House is directed by a Collector of Customs, who is subject to the control of the Board of Revenue as the chief Customs authority, and is assisted by five Assistant Collectors. The examination of goods and their valuation for customs purposes are entrusted to a staff of eighteen appraisers, while the guarding of vessels and patrolling of the port in order to prevent smuggling, the control over the discharge of cargo, and the loading or unloading of salt at the *golās* (warehouses) rest with a special establishment of about 205 officers under the orders of the Superintendent of the Preventive Service and Salt department.

Information as to the tariff is given in Vol. IV, chap. viii, and it will suffice to state here that the ordinary import duty is 5 per cent., either *ad valorem* or on a tariff valuation. The most important exceptions are cotton piece-goods, assessed at  $3\frac{1}{2}$  per cent.; iron and steel, at 1 per cent.; petroleum below a certain flashing point, at 1 anna per imperial gallon; and machinery, railway material, and raw cotton, which are free. The duty on salt has varied; it was reduced from Rs. 2-14 to Rs. 2 per maund in 1882, but was again raised to Rs. 2-8 per maund in 1888, at which figure it continued till March, 1903, when it was again reduced to Rs. 2 per maund. It has recently (1907) been still further reduced to R. 1 per maund. A duty was first imposed on kerosene oil in 1888; and in 1899 countervailing duties were placed upon bounty-fed sugar.

The total customs revenue in Bengal averaged 247 lakhs during the period 1881-90, and 352 lakhs during the following decade. In

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This Act provides for the constitution of three classes of local authorities—the District board with jurisdiction over the whole District, a local board for each subdivision, and Union committees for smaller areas where circumstances may indicate the desirability of appointing them. The District board is the principal local authority, and the local boards and Union committees work in subordination to it, exercising such powers and administering such funds as the District board may direct. District boards have been constituted throughout Bengal, save only in Darjeeling and a few remote tracts; local boards have also been formed in most Districts. On March 31, 1904, there were 42 District boards and 104 local boards in Bengal<sup>1</sup>. The system of village Unions has not yet been fully developed, and only 58 have been created, chiefly in the Burdwān and Presidency Divisions. Half the members of District boards are appointed by Government and half are elected by local boards; where there are no local boards, the District board consists entirely of members appointed by Government. On March 31, 1904, the 42 District boards contained in all 846 members<sup>2</sup>. Of these 221 were members *ex officio*, 292 were appointed by Government, and 333 were elected by the local boards. The Collector of the District has in all cases been appointed chairman. The area dealt with by each board is so large, and the interests of different parts of it are so divergent, that no non-official member would be able to perform effectively the executive duties of the post or to weigh impartially the conflicting claims of different localities. The members of local boards are appointed partly by nomination and partly by election, one or more members being elected for each *thāna*. All residents who possess a small property qualification are entitled to vote, but the number who actually do vote is usually very small. Similar rules have been framed for the constitution of Union committees.

The District boards have full control over all roads and bridges, save on a few main lines of communication of more than local importance. They are also entrusted with the maintenance and supervision of all primary and middle schools, the management of pounds and most of the public ferries, the control over and upkeep of dispensaries, the provision of a proper water-supply, village sanitation, &c. When scarcity occurs, it becomes their duty to subordinate all other objects to the special consideration of saving life, and they are expected to devote their whole available resources to affording relief. If the scarcity is not serious or widespread, the District board is left to cope with it, with

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any place of public resort or residence, to extend the Act to it and to appoint commissioners who, by the levy of a rate on houses or of town duties or otherwise, were to make better provision for purposes of public health or convenience. The Darjeeling municipality was constituted in 1850 under the provisions of this Act; but otherwise very little advantage was taken of it or of a subsequent Act (XX of 1856), the main object of which was to make better provision for the appointment of police *chaukidārs* in towns, but which also provided that any surplus funds raised in a town, primarily for the above purpose, might be applied to cleansing or lighting or otherwise improving it. These two Acts were superseded in the larger towns by Act VI of 1868, which repeated their provisions in a modified form. The first real attempt at inaugurating municipal government was made in 1864, when the District Municipal Improvement Act was passed. This Act authorized the Lieutenant-Governor to appoint municipal commissioners for any town to which it was extended, with power to levy certain rates and taxes to meet the cost of conservancy, general improvement, and police.

The enactments were consolidated and amended by Act V (B.C.) of 1876, in which year there were in existence 24 municipalities under Act III of 1864 and 2 under Act XXVI of 1850, 70 'unions' under Act XX of 1856, and 95 'towns' under Act VI of 1868. The new Act recognized four classes of municipal institutions: namely, first and second-class municipalities, 'unions,' and stations. The elective principle was allowed in the case of municipalities, provided that one-third of the ratepayers desired it; but this condition was fulfilled in respect of only three municipalities. The Magistrate of the District or of the subdivision, as the case might be, was as a rule *ex-officio* chairman of all municipalities situated within his jurisdiction; power was given to the Lieutenant-Governor to appoint other persons, but it was exercised only in a single case.

This Act was, in its turn, superseded by Act III (B.C.) of 1884, which is still in operation, and which provides for the election of a majority of the commissioners and gives to them a far greater degree of independence. By this Act the distinction between first and second-class municipalities was abolished, and the other corporate bodies known as 'unions' and 'stations' were extinguished. Under its provisions the ratepayers of 125 municipalities, out of a total of 161, have obtained the privilege of electing two-thirds of their commissioners, and in 109 cases the latter have been empowered to choose their own chairman. In the remaining towns, which are either very backward or are divided by contending interests or strong party feeling, Government has reserved to itself the power of appointing the commissioners or the chairman, but in only twenty-seven municipalities does it appoint both. Except in Howrah, the municipalities have been relieved of the charges on

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a Chief Engineer, who is also secretary to Government. The Roads and Buildings branch administers five circles<sup>1</sup>, three of which are controlled by Superintending Engineers and two by Executive Engineers, who are designated Inspectors of Works, and whose duties are to inspect the work done under the Engineers employed by the District boards and to exercise professional control over their proceedings. The Imperial and Provincial buildings and roads in these circles are in charge of the District Engineers, where the District boards concerned have accepted the responsibility for their up-keep, and of the Inspectors of Works in certain Districts in which those bodies have not accepted such a responsibility. The Superintending Engineers have control of Public Works divisions held by Executive Engineers, and they also act as Inspectors of Works in their circles. The Roads and Buildings branch also includes a temporary charge, comprising the buildings connected with the Imperial Agricultural Institute at Pūsa, which is under the control of a superintendent of works.

The Irrigation branch comprises four circles, each of which is under a Superintending Engineer. In Irrigation circles the Executive Engineers also carry out the works of the Roads and Buildings branch within the limits of their divisions, and the Superintending Engineers act as Inspectors of Works. Three revenue divisions formed for the assessment and collection of canal water rates are held by Deputy-Collectors under the control of the Superintending Engineer of this branch. The main lines of railway and their branches are administered directly by the Government of India, the Government of Bengal controlling only a few minor railways undertaken by private enterprise.

Rapid progress has been made in all departments since the introduction of Provincial finance in 1871. The Northern section of the Eastern Bengal State Railway was opened in 1878. The Orissa, Midnapore, and Hijili Canals were completed in 1873, and, with the exception of the Calcutta and Eastern Canals, the entire Provincial canal system has been constructed since that date. The canalization of the Bhāngar channel in 1899 and the opening of the Madhumatī Bil route in 1902 have greatly facilitated navigation by the Calcutta and Eastern Canals. As regards roads, the operations of the department are limited to the maintenance of a few trunk lines, and the initiative in the construction of new roads has been transferred to the District boards. Special efforts have, however, been directed to the improvement of communications in the Western Duārs\*, and to the construction of feeder-roads to the railways.

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Cossipore, an ammunition factory at Dum-Dum, and a rifle factory at Ichāpur.

Volunteer corps have their head-quarters at Calcutta, Muzaffarpur, Darjeeling, Rānchī, Jamālpur, Bankipore, Dacca\*, and Chittagong\*; and the head-quarters of the Bengal-Nāgpur Railway Volunteer Rifles are at Kharakpur. The following table gives the total strength of all the corps in 1881, 1891, 1901, and 1903 :—

	1881.	1891.	1901.	1903.
Naval . . . .	Nil	280	200	307
Artillery . . . .	Nil	218	561	422
Engineers . . . .	Nil	Nil	100	126
Light Horse or Mounted Rifles . . . .	61	822	1,106	1,049
Rifles . . . .	2,081	3,443	5,376	5,610
Total	2,142	4,763	7,343	7,514

The Calcutta police force, of which an account will be found in the article on CALCUTTA, has a history of its own, and has always been independent of the police system in other parts of the Province. In the early days of British rule the Bengal *samīndārs* were required to keep up establishments of police for the maintenance of peace, but by Regulation XXII of 1793 this system was abolished; the police were placed under the exclusive control of Government officers, and the *samīndārs* were forbidden to maintain any such force<sup>1</sup>. Every District was divided into police circles, with an area of about 400 square miles, and a *dāroga*, with a staff of subordinate officers, was appointed to each. To meet the cost of these measures, a police tax was imposed on traders and others who were specially interested in the maintenance of the force and who made no other direct contribution to the State; but this tax was abolished in 1797, when court-fees and stamp duties were introduced. The functions of the new force were at first confined to the arresting of accused persons; but in 1797 the police *dārogas* were directed to inquire regarding unnatural deaths, and in 1807 the Magistrate was authorized to order a police inquiry when he saw reason to distrust the truth of a complaint. From this small beginning was soon evolved the regular system of police inquiries now in vogue, which was placed on a legal footing by Regulation XX of 1817.

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India, restricted to nominated candidates, a certain number of appointments being also given by nomination to natives of the country. The competitive examination held in India is now, however, to be abolished. Inspectors are almost invariably promoted sub-inspectors, but in future a certain number are to be appointed direct. Sub-inspectors are appointed either by open competition or by nomination. As a result of the Police Commission of 1903, it has been decided that there is to be no competitive examination for the recruitment of sub-inspectors, but that they shall be, as far as possible, recruited direct, and that a maximum proportion of appointments shall be fixed for promotion from the rank of head constable. In every case they have to go through a year's training in the Bhāgalpur Training School, where they are taught law, the Police Manual so far as it concerns them, the reading and recording of finger-impressions, riding, and drill. Head constables are, as a rule, promoted constables. Constables are recruited at the head-quarters of each District. The percentage of foreigners (i. e. men of another District) which it is permissible to enlist varies in different Districts from 30 to 80. Constables receive some training at the head-quarters before being sent out to investigating centres, and when stationed at head-quarters they also get some instruction in drill. In future they will be trained at central schools which are now being established for the purpose.

Service in the police has, till very lately, been unpopular with educated natives. The appointment of the Police Commission and the hopes of an improved service have, however, of late led many well-connected natives to apply for direct appointment to sub-inspectorships.

The rural police force of *chaukidārs* or village watchmen is a very ancient institution, and, except in East and North Bengal, it is for the most part descended from the old Hindu village system, under which they were remunerated by small assignments of land. The village watchmen were placed under the *dāroḡas* by the Regulation of 1793 already referred to. Between 1813 and 1816 provision was made for the maintenance of *chaukidārs* at all Magistrates' head-quarters, who were paid monthly stipends by the residents of the towns in question; and a somewhat similar arrangement was soon afterwards introduced generally in all Districts where the indigenous system mentioned above did not exist. The powers and duties of the *chaukidārs* were laid down in detail in Regulation XX of 1817. In 1838 their number was estimated to be 190,000. In 1870 a new law was enacted (VI (B.C.) of 1870) detailing their duties and providing for the levy of their pay through the agency of local committees, called *pañchāyats*, who were empowered not only to fix their pay at any rate between Rs. 3 and Rs. 6 a month, but also to appoint and, if necessary, dismiss

India, restricted to nominated candidates, a certain number of appointments being also given by nomination to natives of the country. The competitive examination held in India is now, however, to be abolished. Inspectors are almost invariably promoted sub-inspectors, but in future a certain number are to be appointed direct. Sub-inspectors are appointed either by open competition or by nomination. As a result of the Police Commission of 1903, it has been decided that there is to be no competitive examination for the recruitment of sub-inspectors, but that they shall be, as far as possible, recruited direct, and that a maximum proportion of appointments shall be fixed for promotion from the rank of head constable. In every case they have to go through a year's training in the Bhāgalpur Training School, where they are taught law, the Police Manual so far as it concerns them, the reading and recording of finger-impressions, riding, and drill. Head constables are, as a rule, promoted constables. Constables are recruited at the head-quarters of each District. The percentage of foreigners (i. e. men of another District) which it is permissible to enlist varies in different Districts from 30 to 80. Constables receive some training at the head-quarters before being sent out to investigating centres, and when stationed at head-quarters they also get some instruction in drill. In future they will be trained at central schools which are now being established for the purpose.

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The rural police force of *chaukidārs* or village watchmen is a very ancient institution, and, except in East and North Bengal, it is for the most part descended from the old Hindu village system, under which they were remunerated by small assignments of land. The village watchmen were placed under the *dāroḡas* by the Regulation of 1793 already referred to. Between 1813 and 1816 provision was made for the maintenance of *chaukidārs* at all Magistrates' head-quarters, who were paid monthly stipends by the residents of the towns in question; and a somewhat similar arrangement was soon afterwards introduced generally in all Districts where the indigenous system mentioned above did not exist. The powers and duties of the *chaukidārs* were laid down in detail in Regulation XX of 1817. In 1838 their number was estimated to be 190,000. In 1870 a new law was enacted (VI (B.C.) of 1870) detailing their duties and providing for the levy of their pay through the agency of local committees, called *pañchāyats*, who were empowered not only to fix their pay at any rate between Rs. 3 and Rs. 6 a month, but also to appoint and, if necessary, dismiss

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On an average, 134,000 cases were reported yearly by the police between 1896 and 1901, of which 67,000 were dealt with by the criminal courts, 56,700 or 84.6 per cent. ending in conviction and the remainder in discharge or acquittal. During the same period 32,000 cases were on the average dealt with yearly by the Calcutta police, the nature of whose work is very different ; of these, 29,800 were referred to the courts, and all but 950 ended in conviction.

The plan of identifying criminals by means of head measurements was introduced by Sir Edward Henry, when Inspector-General of Police ; but he subsequently replaced it by the system of finger-prints, which is now in vogue everywhere. The record of finger-impressions, which in 1897 consisted of only 8,000 slips, had risen to nearly 56,000 in 1901, and to nearly 80,000 in 1903, when 1,555 men were thus identified, compared with 345 in 1898, the first complete year of working.

A special reserve of from twenty to fifty constables, armed with converted Sniders (now being replaced by converted Martini-Henry carbines) under a sub-inspector, is maintained at the head-quarters of each District, and four military police companies of 100 each, armed with Martini-Henry rifles, are stationed at Dacca\*, Bhāgalpur, Dumkā, and Hooghly. In accordance with the recommendation of the Police Commission, these reserves are to be strengthened and placed in charge of European inspectors, and all members of the force are to pass periodically through them for courses of training. A separate railway police was formed in 1867, and now comprises 2 Assistant Inspectors-General, 17 inspectors, 44 sub-inspectors, 154 head constables, and 731 native and 14 European constables.

The jails of Bengal are divided into three classes—Central, District, and subsidiary. The Central jails, which are in charge of whole-time officers, are intended for the confinement of persons sentenced to long terms of imprisonment. Including the Presidency Jail in Calcutta, where European convicts are incarcerated, there are now eight<sup>1</sup> Central jails ; in 1881 there were nine, and in 1891 seven. At the head-quarters of Districts where there is no Central jail, there is a District jail, which, except at Darjeeling, is supervised by the Civil Surgeon. Prisoners sentenced to imprisonment for more than two years are transferred to a Central jail. There are subsidiary jails at all subdivisional head-quarters for the detention of under-trial prisoners,

<sup>1</sup> There are six Central jails in Bengal as now constituted.

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Under Lord William Bentinck the cause of English education, which had hitherto been fostered mainly by the independent efforts of missionaries, rapidly gained ground; and in 1835 it was decided, through the influence of Macaulay, to impart instruction in the higher schools through the medium of English. The abolition in 1837 of Persian as the court language gave a great stimulus to the study of English, and about the same time the education grant was raised to  $4\frac{1}{2}$  lakhs; a system of scholarships was created for English schools, and Bengal was divided into nine educational circles, in most of which there was a central college, while every District was provided with a school to teach both English and the vernacular.

The Committee of Public Instruction was replaced in 1842 by a Council of Education. A system of examinations and scholarships was devised, and steps were taken to obtain employment in the public service for the most successful students. Model vernacular schools were established, and arrangements were made for the periodical examination of indigenous schools. Books were lent to these schools, and money rewards, amounting to about Rs. 5,000 a year, were given to deserving teachers and pupils.

The celebrated educational Dispatch, issued by the Court of Directors in 1854, gave a great impulse to education in India, and led in Bengal to the appointment in 1855 of a Director of Public Instruction and of a certain number of inspectors and sub-inspectors of schools, and also, shortly afterwards, to the constitution of a University Committee. This was followed by the establishment of a regular department of Public Instruction. From that date the progress of education in Bengal has been rapid and sustained. Systematic inspection was introduced, the scholarship system was developed, and grants-in-aid were given to private schools and colleges. All grades of education were fostered, and a complete system of examinations was organized. Encouragement was afforded to elementary education by means of small scholarships offered to the best pupils of vernacular schools. The most advanced boys from the District schools competed every year for higher scholarships tenable in colleges. Grants-in-aid were given to 79 English and 140 vernacular schools, and the School Book and Vernacular Literature Societies were established, both of which published useful works.

In Bengal proper the colleges established prior to 1857 were fourteen

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assistant inspectors, supervise all schools in their Divisions. Usually each District is in charge of a deputy-inspector, who is assisted by a sub-inspector in each subdivision and *gurū* instructors in each *thāna*. The District boards have control over education more or less elementary in rural tracts, but in some cases they have delegated their duties in regard to primary education to local boards. In the few Districts where these boards do not exist, the local control is vested in special committees.

The department<sup>1</sup> maintains 11 Arts colleges, including one for girls; 9 professional colleges, of which 7 are law colleges attached to and forming part of the same number of Arts colleges; 77 secondary schools, including 2 high and one middle English school for girls; 123 primary schools, including one for girls; and also 145 schools for special instruction, including a Government college and 4 Government vernacular schools for medicine.

The teaching institutions fall into three main groups: namely, University education, or the advanced instruction given to candidates for degrees; and secondary education, or the instruction given to boys and girls who have passed beyond the third or elementary stage, known as primary education.

The rise of the Calcutta University dates from 1856, when rules were formulated for conducting examinations and granting degrees in Arts, Law, Medicine, and Engineering, and the Presidency College was placed upon an improved footing. The Act of Incorporation of the Calcutta University was passed in January, 1857. In 1859 the intermediate examination in Arts was established, the degree of 'Licentiate' was created in the Faculties of Law and Engineering, and that of Doctor in the Faculty of Law. The degree of M.A. was conferred for the first time in 1862, and that of Bachelor of Science in 1901-2.

In 1904 the Indian Universities Act was passed, which gives greater control in academical matters to the teachers who are connected with colleges affiliated to the University; it also aims at improving the standard of education in colleges, imposes more stringent conditions on affiliation, and provides for periodical inspection by experts.

The Viceroy is Chancellor of the University. The Fellows are appointed by him, but some of them are selected on the suggestion of graduates and of the Faculties of the Senate. The Vice-Chancellor is appointed by the Governor-General-in-Council from the Fellows. The University is not a teaching University in the ordinary sense of the

<sup>1</sup> In the new Provincial area the department maintains 8 Arts colleges, one of which is for girls; 6 professional colleges; 59 secondary schools, including one high and 2 middle English schools for girls; 86 primary schools, one of which is for girls; and 103 special schools, including one Government college and 3 Government vernacular schools for medicine.

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Students not living with their parents or guardians are now required to reside at duly authorized hostels. The number of such hostels in 1903-4 was 411, with 14,045 inmates; and they were maintained at a cost of 10.95 lakhs, of which Rs. 51,000 was paid from public sources.

The results of the most important examinations in each of the years 1880-1, 1890-1, 1900-1, and 1903-4 are shown below:—

Passes* in	1880-1.	1890-1.	1900-1.	1903-4.
Matriculation . . . . .	1,184	1,816	2,812	2,394
First or Intermediate in Arts	320	693	1,039	1,198
Ordinary Bachelor of Arts degree . . . . .	126	231	329	295
Higher and special degrees .	30†	57‡	91§	74

\* Including private candidates.

† In M.A. only. Besides, there were 35 passes in B.L., 17 in L.M.S., one in Honours in Medicine, 9 in M.B., 10 in L.E., and 3 in B.E.

‡ In M.A. only. Besides, there were 128 passes in B.L., 13 in 2nd L.M.S., one in Honours in Medicine, 3 in 2nd M.B., one in M.D., 3 in L.E., and 2 in B.E.

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Schools which have classes where students are prepared for the University Matriculation examination are classed as 'high schools,' and all other secondary schools are 'middle schools.' The latter, again, are divided into two classes, according as English is or is not included in the curriculum. This language is the medium of instruction in the first four classes of high schools, and it is taught as a second language in all but the lowest classes of both high and middle English schools. There is a tendency to convert middle vernacular into middle English schools, and to raise the latter to the rank of high schools; the middle English

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The number of Arts colleges and schools for girls rose from 831 in 1881 to 2,362 in 1891, to 2,973 in 1901, and to 5,005 in 1904. In the same years the numbers of girls in colleges were respectively 5, 40, 72, and 98; in secondary schools, 6,000, 5,500, 5,600, and 5,600; and in primary schools, 29,000, 75,000, 91,000, and 147,000. The percentage of girls under instruction to the number of school-going age was 0.87 in 1880-1, 1.61 in 1890-1, 1.8 in 1900-1, and 2.8 in 1903-4. The Bethune College, La Martinière, and Loretto House are the principal centres of female education. In all twelve high schools for girls were aided by Government or by District or municipal boards in 1903-4.

District boards spent Rs. 25,000 on girls' schools in 1890-1, Rs. 38,000 in 1900-1, and Rs. 80,000 in 1903-4. The boards have also created special scholarships for female pupils in primary schools. To encourage their education up to higher standards at home, Government has recently ruled that girls may draw scholarship stipends without attending schools, if they can prove that they have attained a higher standard by home study. There are an inspectress and assistant inspectress of girls' schools, whose duty it is to look after female education.

The establishment of normal schools for training teachers other than *gurūs* dates from 1855, but it was not until 1874 that they became at all numerous. There were then 56 in all. There are 10 medical schools as compared with 5 in 1884; of these 4 are Government institutions, and the rest are unaided. Among other special schools may be mentioned 4 engineering and survey and 4 art schools. There were 27 industrial schools with 806 pupils in 1903-4, against 4 with 144 pupils twenty years previously. *Madrasas* (for the teaching of Arabic and Persian) have increased during the same period from 7 to 83. Various other educational institutions, such as recognized *toḷs* (for the teaching of Sanskrit), reformatory schools, music schools, and schools for the deaf and dumb, number in all 590. An agricultural department attached to the Sibpur Civil Engineering College was attended in 1903-4 by 25 students, 11 in the first year class and 14 in the second year; it has not been very successful and will shortly be removed to Pūsa.

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The expenditure on the various classes of educational institutions in 1900-1 and in 1903-4, with the sources from which the funds were derived, is shown in Table XIV at the end of this article (p. 358).

The number of children attending schools represented 10.2 per cent. of the total population of school-going age in 1881, 13.5 in 1891, 14.2 in 1901, and 16.5 per cent. in 1903-4. The number of persons returned as literate at the Census of 1901 was 4,259,000, or 5.5 per cent. of the total population; for males the percentage was 10.5 and for females 0.5. During the last decade the number of literate males shows an increase of 15 per cent., while that of females has risen by 63 per cent. In every 10,000 persons of each sex, 89 males and 6 females can read and write English. The Burdwan, Presidency, and Orissa Divisions are the most advanced in the matter of education. Among religions, Christians take the lead, followed, in the order mentioned, by Buddhists, Hindus, Musalmāns, and Animists. Of the Hindu indigenous castes, the Baidyas and Kāyasths have the largest proportion of literate persons, and the depressed race-castes of Bihār have the smallest.

The fees in Government colleges vary from Rs. 12 a month in the Presidency College to Rs. 2 in the Calcutta Madrasa and the Sanskrit College; those in aided colleges range from Rs. 5 to Rs. 3, and those in unaided colleges from Rs. 5 to Rs. 2-8<sup>1</sup>. In Government high schools fees range from R. 1 to Rs. 5; in aided high schools from annas 8 to Rs. 2, and in unaided high schools from annas 4 to Rs. 2. In Government middle schools the fees vary from annas 2 to R. 1, in aided middle schools from 2 to 8 annas, and in unaided middle schools from 1 to 8 annas. In primary schools the fees are from 1 to 4 annas.

The principal statistics of colleges, schools, and scholars for each of the years 1890-1, 1900-1, and 1903-4 are shown in Table XV at the end of this article (p. 359).

Leaving out of account the *Samāchār Darpan*, which was started long ago at Serampore by Baptist missionaries, and the *Samāchār Chandrikā*, a Calcutta publication, it is doubtful whether even half a dozen vernacular newspapers were in existence in Bengal before 1860. In 1863, when a weekly official report on native papers was instituted, the total number was 20, of which one was published in English and Urdū, 3 in Persian, one in Hindī, and 15 in Bengali. No

<sup>1</sup> The Rāj College at Burdwan charges no fees.

rendered by missionaries, who have established many schools in their midst. The Dublin University Mission has started a college at Hazāribāgh for the promotion of their higher education, and a Government high school at Rāngāmāti is also chiefly intended for aborigines. In the Santāl Parganas a special inspector has been appointed to visit Santāl schools. In all 8,000 Christian and 34,000 non-Christian aborigines attended school in 1903-4.

The expenditure on the various classes of educational institutions in 1900-1 and in 1903-4, with the sources from which the funds were derived, is shown in Table XIV at the end of this article (p. 358).

The number of children attending schools represented 10.2 per cent. of the total population of school-going age in 1881, 13.5 in 1891, 14.2 in 1901, and 16.5 per cent. in 1903-4. The number of persons returned as literate at the Census of 1901 was 4,259,000, or 5.5 per cent. of the total population; for males the percentage was 10.5 and for females 0.5. During the last decade the number of literate males shows an increase of 15 per cent., while that of females has risen by 63 per cent. In every 10,000 persons of each sex, 89 males and 6 females can read and write English. The Burdwān, Presidency, and Orissa Divisions are the most advanced in the matter of education. Among religions, Christians take the lead, followed, in the order mentioned, by Buddhists, Hindus, Musalmāns, and Animists. Of the Hindu indigenous castes, the Baidyas and Kāyasths have the largest proportion of literate persons, and the depressed race-castes of Bihār have the smallest.

The fees in Government colleges vary from Rs. 12 a month in the Presidency College to Rs. 2 in the Calcutta Madrasa and the Sanskrit College; those in aided colleges range from Rs. 5 to Rs. 3, and those in unaided colleges from Rs. 5 to Rs. 2-8<sup>1</sup>. In Government high schools fees range from R. 1 to Rs. 5; in aided high schools from annas 8 to Rs. 2, and in unaided high schools from annas 4 to Rs. 2. In Government middle schools the fees vary from annas 2 to R. 1, in aided middle schools from 2 to 8 annas, and in unaided middle schools from 1 to 8 annas. In primary schools the fees are from 1 to 4 annas.

The principal statistics of colleges, schools, and scholars for each of the years 1890-1, 1900-1, and 1903-4 are shown in Table XV at the end of this article (p. 359).

Leaving out of account the *Samāchār Darpan*, which was started long ago at Serampore by Baptist missionaries, and the *Samāchār Chandrikā*, a Calcutta publication, it is doubtful whether even half a dozen vernacular newspapers were in existence in Bengal before 1860. In 1863, when a weekly official report on native papers was instituted, the total number was 20, of which one was published in English and Urdū, 3 in Persian, one in Hindī, and 15 in Bengali. No

<sup>1</sup> The Rāj College at Burdwān charges no fees.

There are dispensaries at all District and subdivisional head-quarters and wherever there are municipalities, and also at many places in the interior; all the former and many of the latter of these have accommodation for in-patients. They are for the most part maintained by the municipality or District board concerned, with the aid of grants from Government and public subscriptions. The total number of these dispensaries in 1903 was 614, compared with only 237 twenty years earlier. For further details Table XVI at the end of this article may be referred to (p. 360).

There are 5 lunatic asylums in the Province, situated at Bhawānīpur in Calcutta, Dacca\*, Patna, Cuttack, and Berhampore. Of these, the first is reserved for Europeans and Eurasians, and the others for natives; the latter, with the exception of that at Dacca\*, will soon be replaced by a single central asylum. The alleged causes of insanity among Europeans are chiefly the abuse of alcohol among males and heredity in the case of females; *gānja*-smoking and heredity are the chief causes assigned for lunacy among natives.

There are 8 asylums for lepers, at Gobrā, Deogarh, Purūlia, Rāniganj, Asansol, Bānkurā, Bhāgalpur, and Lohārdagā. The six last mentioned have been established by the Society for Missions to Lepers in India and the East, and the Gobrā asylum is a Government institution managed by a body appointed by Government. The total number of inmates in October, 1904, was 1,179, of whom 622 were in the Purūlia asylum. The Lepers Act, III of 1898, which came into force in Bengal in 1901, provides for the segregation and medical treatment of pauper lepers and for the control of lepers following certain trades connected with the bodily requirements of human beings.

In former times the practice of inoculation was widespread. The operation was preceded by a ceremony performed in honour of Sītala, the goddess of small-pox: a twig of a mango-tree was dipped in a pitcher of water, some *mantras* or charms were recited by a Brāhman, and offerings of milk and sweetmeats were made. The patient was then inoculated with the crust of small-pox on the right forearm, if a male, or on the left forearm, if a female. He was bathed on the second day, to bring on fever, and was then confined for twenty-one days, after which a mixture of turmeric, *nīm* leaves, and coco-nut oil was rubbed over the body. Inoculation is still practised clandestinely in parts of Orissa and Bihār, but it is becoming more and more rare, and vaccination is rapidly taking its place. Vaccinators are licensed by District Magistrates, and their work is supervised by the Civil Surgeons and the Superintendents of Vaccination. Where the older method survives, the vaccinators are usually recruited from the ranks of the former inoculators, but in the Province as a whole barely a quarter of the staff belongs to this class.

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with the Brahmaputra, and all changes due to alluvion and diluvion which had taken place since the revenue survey were mapped. In 1874-6 this survey was continued down to the sea. About the same time a number of surveys were made in different parts of the Province, either in order to resettle the revenue of Government estates, as in the case of Chittagong\* and Khurdā, or to assess *ghātwāli*<sup>1</sup> lands in Chotā Nāgpur. These surveys were generally on a scale of 16 inches to the mile and showed field boundaries, but they were with some exceptions partial and unprofessional, and were lacking in accuracy and finish. In 1889 it became necessary to survey the sub-province of Orissa and the District of Chittagong\*, in order to resettle the revenue of time-expired estates, and professional detachments of the Survey department of the Government of India were organized for this purpose. In 1890 it was decided to prepare a survey and record-of-rights in the North Bihār Districts, and similar methods were adopted. The total area dealt with by parties of the Survey of the Government of India between 1889 and the end of September, 1904, has been 32,915 square miles, as shown below:—

District.	Area in square miles.	District.	Area in square miles.	District.	Area in square miles.
Chittagong*	2,003	Cuttack .	2,269	Purnea .	2,408
Muzaffarpur	3,046	Balasore .	1,733	Backergunge*	2,126
Champāran	3,280	Putī .	1,134	Rānchī .	1,344
Sāran .	2,510	Tippera*	554	Other District	
Gayā .	546	Palāman .	294	areas under 200	
Darbhanga.	3,307	Bhāgalpur .	3,849	square miles .	853
Monghyr .	1,449	Darjeeling .	210		
				Total	32,915

These surveys have been made on a scale of 16 inches to the mile (larger scales have sometimes been employed for crowded village sites), and the maps show the boundary of each field as well as all topographical features. In addition to the area shown above, similar operations have been carried out in the Santāl Parganas, Singhbhūm, Noākhālī\* and elsewhere, by parties working under the supervision of revenue officers, the field-to-field measurements in this case being sometimes preceded by a professional traverse survey. A large number of petty estates have also been surveyed at the request of the proprietors. Taking all these surveys together, cadastral maps of about 36,405 square miles, or nearly a quarter of the area of British territory in the Province, have been prepared since 1889.

In 1892 an officer of the Survey of India was appointed, with the title of Director of Bengal Surveys, to administer the Bengal Survey directly

<sup>1</sup> Lands held, in lieu of pay, for police services. Disputes had arisen as to what lands were so held, and as to the services to be rendered.

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## TABLE I. TEMPERATURE AND RAINFALL OF BENGAL

## (a) TEMPERATURE

Station.	Height of Observatory above sea-level in feet.	Average temperature (in degrees Fahrenheit) for twenty-five years ending with 1901 in									
		January.		May.		July.		November.			
		Diurnal range.		Diurnal range.		Diurnal range.		Diurnal range.			
		Mean.		Mean.		Mean.		Mean.		Mean.	
Calcutta (Alipore) .	21	66.3	21.7	85.9	17.0	83.3	9.8	73.1	17.2	73.1	17.2
Chittagong* †	87	66.9	23.1	82.1	13.5	81.2	9.2	74.5	17.4	74.5	17.4
Cuttack .	80	70.7	21.1	90.7	21.4	84.4	11.3	75.8	19.1	75.8	19.1
Jalpaiguri* †	284	61.4	21.6	80.1	16.3	82.6	11.8	70.7	21.4	70.7	21.4
Patna .	183	61.5	22.0	88.9	22.7	85.1	10.7	71.4	21.2	71.4	21.2
Hazâribâgh ‡	2,007	61.8	21.9	87.2	23.7	79.4	11.1	67.9	19.5	67.9	19.5
Darjeeling (Hill station)	7,376	40.1	11.0	57.5	11.8	62.0	8.7	48.3	12.4	48.3	12.4

NOTE.—The diurnal range is the average difference between maximum and minimum temperatures of each day.

‡ These figures are for eighteen years.

† These figures are for twenty-four years.

## (b) RAINFALL

Station.	Average rainfall (in inches) for twenty-five years ending with 1901 in											
	January.		February.		March.		April.		May.		June.	
	Diurnal range.		Diurnal range.		Diurnal range.		Diurnal range.		Diurnal range.		Diurnal range.	
	Mean.		Mean.		Mean.		Mean.		Mean.		Mean.	
Calcutta (Alipore)* †.	0.33	1.02	0.33	1.09	1.54	5.62	10.95	12.34	12.72	10.75	3.80	0.71
Chittagong* .	0.28	1.05	2.52	3.78	3.78	9.57	21.85	20.25	17.07	11.44	6.20	1.50
Cuttack .	0.24	0.58	1.17	1.03	4.20	4.20	10.06	11.30	12.98	10.06	5.29	1.63
Jalpaiguri* .	0.48	0.44	1.36	3.28	12.60	12.60	24.20	31.23	25.45	21.62	4.16	0.20
Patna .	0.69	0.64	0.39	0.27	2.09	2.31	7.94	12.36	12.03	6.69	3.13	0.19
Hazâribâgh	0.81	0.90	0.76	0.46	2.31	2.31	8.65	13.58	12.72	8.89	3.00	0.28
Darjeeling (Hill station) .	0.81	0.95	1.75	4.25	8.98	23.44	33.56	26.04	18.35	4.30	0.25	0.24
Total of year.	61.17	96.24	58.78	125.11	46.65	52.52	122.93	0.30	0.73	0.24	0.09	0.14

† These figures are for twenty-four years.

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## (b) RAINFALL

Station.	Average rainfall (in inches) for twenty-five years ending with 1901 in											
	January.		February.		March.		April.		May.		June.	
	Diurnal range.		Diurnal range.		Diurnal range.		Diurnal range.		Diurnal range.		Diurnal range.	
	Mean.		Mean.		Mean.		Mean.		Mean.		Mean.	
Calcutta (Alipore)* †.	0.33	1.02	0.33	1.09	1.54	5.62	10.95	12.34	12.72	10.75	3.80	0.71
Chittagong* .	0.28	1.05	2.52	3.78	3.78	9.57	21.85	20.25	17.07	11.44	6.20	1.50
Cuttack .	0.24	0.58	1.17	1.03	4.20	4.20	10.06	11.30	12.98	10.06	5.29	1.63
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Darjeeling (Hill station) .	0.81	0.95	1.75	4.25	8.98	23.44	33.56	26.04	18.35	4.30	0.25	0.25
Total of year.	61.17	96.24	58.78	125.11	46.65	52.52	122.93	0.30	0.73	0.24	0.09	0.14

† These figures are for twenty-four years.



TABLE IIA. DISTRIBUTION OF POPULATION IN BENGAL, 1901

Administrative Divisions and Districts.	Area in square miles.	Number of towns.	Number of villages.	Total Population.			Urban Population.			Persons per square mile in rural areas.
				Males.	Females.	Total.	Males.	Females.	Total.	
Burdwān . . . . .	2,689	6	3,662	764,742	767,733	1,532,475	47,308	39,420	86,728	570
Birbhm . . . . .	1,752	1	3,317	444,689	457,591	902,280	4,703	3,959	8,662	515
Bankurā . . . . .	2,031	3	5,592	549,484	566,927	1,116,411	26,086	27,189	53,275	426
Midnapore . . . . .	5,186	7	8,464	1,390,233	1,398,881	2,789,114	46,457	43,419	89,876	538
Hooghly . . . . .	1,191	8	2,383	528,279	531,003	1,049,282	76,795	57,097	133,892	881
Howrah . . . . .	510	2	1,451	439,525	410,989	850,514	111,287	64,969	176,256	1,668
Total, Burdwan Division . . . . .	13,949	27	24,869	4,116,952	4,123,124	8,240,076	312,636	236,083	548,719	591
Twenty-four Parganas . . . . .	4,844	25	5,082	1,092,916	985,443	2,078,359	232,004	166,126	398,130	429
Calcutta . . . . .	32	1	...	562,596	285,200	847,796	562,596	285,200	847,796	26,494
Nadā . . . . .	2,793	9	3,411	827,509	839,982	1,667,491	46,386	48,909	95,295	597
Murshidābād . . . . .	2,143	5	3,668	653,346	679,838	1,333,184	39,123	36,785	75,908	622
Jessore . . . . .	2,925	3	4,894	914,025	899,130	1,813,155	11,711	9,588	21,299	620
Khulnā . . . . .	4,765	3	3,441	653,470	599,573	1,253,043	13,409	10,827	24,236	263
Total, Presidency Division . . . . .	17,502	46	20,496	4,703,862	4,289,166	8,993,028	905,229	557,495	1,462,724	514
Rājshāhi* . . . . .	2,593	2	6,344	741,690	720,717	1,462,407	16,160	14,083	30,243	564
Dinājpur* . . . . .	3,946	1	7,841	823,972	743,108	1,567,080	8,067	5,363	13,430	397
Jalpaiguri* . . . . .	2,902	2	766	422,877	394,503	787,380	6,513	3,776	10,289	266
Darjeeling . . . . .	1,164	2	569	133,005	116,112	249,117	12,659	8,734	21,393	214
Rangpur* . . . . .	3,493	6	5,212	1,125,109	1,029,072	2,154,181	18,892	10,592	29,484	617
Bogra* . . . . .	1,359	2	3,865	437,349	417,184	854,533	6,319	4,879	11,198	629
Pābna* . . . . .	1,839	2	3,720	709,396	711,065	1,420,461	22,209	19,329	41,538	772
Total, Rājshāhi Division* . . . . .	17,356	17	28,317	4,393,398	4,101,761	8,495,159	90,819	66,756	157,575	489
Dacca* . . . . .	2,752	2	7,263	1,312,417	1,337,105	2,649,522	67,331	47,683	115,014	952
Mymensingh* . . . . .	6,332	8	9,770	2,014,805	1,900,263	3,915,068	59,733	45,664	105,397	618
Faridpur* . . . . .	2,381	2	5,283	970,164	967,482	1,937,646	16,238	12,874	29,112	849
Backergunge* . . . . .	4,542	5	4,612	1,175,903	1,115,849	2,291,752	30,996	14,578	45,574	505
Total, Dacca Division* . . . . .	15,937	17	26,928	5,473,289	5,320,699	10,793,988	174,298	120,799	295,097	677
Tippera* . . . . .	2,499	3	5,361	1,085,989	1,032,002	2,117,991	28,656	19,790	48,446	848
Nôkhālī* . . . . .	2,492	1	2,633	568,777	572,951	1,141,728	4,303	2,217	6,520	694
Chittagong* . . . . .	5,138	2	1,450	641,392	711,838	1,353,230	15,540	10,445	25,985	543
Chittagong Hill Tracts* . . . . .	11,773	6	296	68,238	56,544	124,782	...	...	...	24
Total, Chittagong Division* . . . . .	11,773	6	9,740	2,364,396	2,373,335	4,737,731	48,499	32,452	80,951	402

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Howrah . . . . .	510	2	1,451	439,525	440,989	880,514	111,287	64,969	176,256	1,668
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Calcutta . . . . .	32	1	...	562,596	285,200	847,796	562,596	285,200	847,796	26,494
Nadā . . . . .	2,793	9	3,411	827,509	839,982	1,667,491	46,386	48,909	95,295	597
Murshidābād . . . . .	2,143	5	3,668	653,346	679,838	1,333,184	39,123	36,785	75,908	622
Jessore . . . . .	2,925	3	4,894	914,025	899,130	1,813,155	11,711	9,588	21,299	620
Khulnā . . . . .	4,765	3	3,441	653,470	599,573	1,253,043	13,409	10,827	24,236	263
Total, Presidency Division . . . . .	17,502	46	20,496	4,703,862	4,289,166	8,993,028	905,229	557,495	1,462,724	514
Rājshāhi* . . . . .	2,593	2	6,344	741,690	720,717	1,462,407	16,160	14,083	30,243	564
Dinājpur* . . . . .	3,946	1	7,841	823,972	743,108	1,567,080	8,067	5,363	13,430	397
Jalpaiguri* . . . . .	2,902	2	766	422,877	394,503	787,380	6,513	3,776	10,289	266
Darjeeling . . . . .	1,164	2	569	133,005	116,112	249,117	12,659	8,734	21,393	214
Rangpur* . . . . .	3,493	6	5,212	1,125,109	1,029,072	2,154,181	18,892	10,592	29,484	617
Bogra* . . . . .	1,359	2	3,865	437,349	417,184	854,533	6,319	4,879	11,198	629
Pābna* . . . . .	1,839	2	3,720	709,396	711,065	1,420,461	22,209	19,329	41,538	772
Total, Rājshāhi Division* . . . . .	17,356	17	28,317	4,393,398	4,101,761	8,495,159	90,819	66,756	157,575	489
Dacca* . . . . .	2,752	2	7,263	1,312,417	1,337,105	2,649,522	67,331	47,683	115,014	952
Mymensingh* . . . . .	6,332	8	9,770	2,014,805	1,900,263	3,915,068	59,733	45,664	105,397	618
Faridpur* . . . . .	2,381	2	5,283	970,164	967,482	1,937,646	16,238	12,874	29,112	849
Backergunge* . . . . .	4,542	5	4,612	1,175,903	1,115,849	2,291,752	30,996	14,578	45,574	505
Total, Dacca Division* . . . . .	15,937	17	26,928	5,473,289	5,320,699	10,793,988	174,298	120,799	295,097	677
Tippera* . . . . .	2,499	3	5,361	1,085,989	1,032,002	2,117,991	28,656	19,790	48,446	848
Nôtkhālī* . . . . .	2,492	1	2,633	503,777	572,951	1,076,728	4,303	2,217	6,520	694
Chittagong* . . . . .	5,138	2	1,450	641,392	711,838	1,353,230	15,540	10,445	25,985	543
Chittagong Hill Tracts* . . . . .	11,773	6	296	68,238	56,544	124,782	...	...	...	24
Total, Chittagong Division* . . . . .	11,773	6	9,740	2,364,396	2,373,335	4,737,731	48,499	32,452	80,951	402

TABLE III  
STATISTICS OF CANALS IN BENGAL

STATISTICS OF

Canals.	Area irrigated (in square miles).	Receipts, in thousands of rupees.		Working expenses, in thousands of rupees.	Net revenue, in thousands of rupees.	Percent- age of net revenue on capital outlay.
		Irrigation.	Naviga- tion.			
Average for ten years ending 1889-90.						
Son . . .	447	6,70	63	6,15	+ 1,45	+ 0.57
Orissa . . .	172	1,34	84	3,90	- 1,55	- 0.69
Midnapore . .	128	1,10	1,28	2,26	+ 26	+ 0.31
Average for ten years ending 1899-1900.						
Son . . .	645	8,69	72	6,59	+ 3,10	+ 1.15
Orissa . . .	256	2,51	1,53	4,89	- 63	- 0.24
Midnapore . .	119	1,25	1,23	2,41	+ 28	+ 0.33
Year 1900-1.						
Son . . .	675	10,39	37	6,24	+ 4,86	+ 1.82
Orissa . . .	319	2,88	90	4,52	- 44	- 0.17
Midnapore . .	125	1,19	98	1,72	+ 61	+ 0.72
Year 1903-4.						
Son . . .	791	12,51	23	5,38	+ 7,86	+ 2.94
Orissa . . .	328	3,26	70	3,83	+ 45	+ 0.17
Midnapore . .	145	1,49	47	1,50	+ 70	+ 0.82

TABLE III  
STATISTICS OF CANALS IN BENGAL

STATISTICS OF

Canals.	Area irrigated (in square miles).	Receipts, in thousands of rupees.		Working expenses, in thousands of rupees.	Net revenue, in thousands of rupees.	Percent- age of net revenue on capital outlay.
		Irrigation.	Naviga- tion.			
Average for ten years ending 1889-90.						
Son . . .	447	6,70	63	6,15	+ 1,45	+ 0.57
Orissa . . .	172	1,34	84	3,90	- 1,55	- 0.69
Midnapore . .	128	1,10	1,28	2,26	+ 26	+ 0.31
Average for ten years ending 1899-1900.						
Son . . .	645	8,69	72	6,59	+ 3,10	+ 1.15
Orissa . . .	256	2,51	1,53	4,89	- 63	- 0.24
Midnapore . .	119	1,25	1,23	2,41	+ 28	+ 0.33
Year 1900-1.						
Son . . .	675	10,39	37	6,24	+ 4,86	+ 1.82
Orissa . . .	319	2,88	90	4,52	- 44	- 0.17
Midnapore . .	125	1,19	98	1,72	+ 61	+ 0.72
Year 1903-4.						
Son . . .	791	12,51	23	5,38	+ 7,86	+ 2.94
Orissa . . .	328	3,26	70	3,83	+ 45	+ 0.17
Midnapore . .	145	1,49	47	1,50	+ 70	+ 0.82

TABLE V

TRADE OF BENGAL WITH OTHER PROVINCES AND STATES IN INDIA

(In thousands of rupees)

	By sea (exclusive of Government stores and treasure).			By rail and river.		
	1890-1.	1900-1.	1903-4.	1890-1.	1900-1.	1903-4.
<i>Imports</i> (Foreign and Indian goods) . .	3,32,37	4,60,00	4,75,33	13,46,91	21,85,86	26,36,88
Cotton, raw . . . .	49,47	5,09	7,11	1,11,65	79,39	1,58,87
„ twist and yarn . .	47,36	59,68	44,19	2,05	40,68	35,37
„ piece-goods . . .	35,24	57,67	54,83	9,29	24,03	31,69
„ other manufactures . .	1,60	2,02	2,35	...	70	7,27
Grain and pulse . . .	2,68	38,67	5,79	92,68	1,38,40	3,94,69
Hides and skins . . .	4,31	4,84	80	60,16	1,40,30	1,05,06
Metals and manufactures of metals . . . .	5,63	21,11	13,08	40,47	52,38	85,50
Oils . . . . .	9,30	74,14	1,71,38	1,60	11,15	10,07
Oilseeds . . . . .	43,52	23,12	16,52	1,43,12	2,52,46	2,88,53
Opium . . . . .	...	...	...	2,32,94	3,12,36	3,38,78
Provisions . . . . .	3,03	5,82	6,04	60,24	91,52	1,12,75
Salt . . . . .	18,12	17,58	10,55	2,61	22,24	19,08
Spices . . . . .	15,50	30,19	29,73	1,33	10,29	46,47
Sugar . . . . .	5,96	19,37	13,06	4,82	64,03	67,64
Tea . . . . .	2	8	38	3,43,60	4,66,38	5,53,36
Wood . . . . .	44,10	46,63	41,82	...	20,55	22,97
Woollen goods . . . .	68	81	29	5,70	89,10	31,83
All other articles . . .	45,85	53,18	57,41	2,34,65	3,69,90	3,26,95
Treasure . . . . .	11,10	7,46	4,27	Not registered.	3,38,66	4,21,82
<i>Exports</i> (Foreign and Indian goods) . .	5,36,76	7,16,30	6,44,68	11,93,30	19,52,91	18,05,29
Coal and coke . . . .	9,97	1,43,69	1,13,24	25,05	88,75	1,39,48
Cotton goods . . . . .	64,92	36,00	42,09	5,77,21	4,51,73	5,96,38
Grain and pulse . . .	1,66,08	1,93,30	1,18,19	40,43	4,97,68	81,80
Jute and manufactures of jute . . . . .	1,25,59	1,25,18	1,36,59	35,65	90,20	1,41,00
Metals and manufactures of metals . . . .	11,98	12,51	18,73	1,55,69	1,58,32	1,77,26
Oils . . . . .	1,78	6,60	15,77	31,10	64,46	66,85
Provisions . . . . .	14,86	23,27	31,22	35,15	66,45	41,96
Spices . . . . .	30,41	42,99	44,47	35,82	54,83	55,62
Sugar . . . . .	2,22	2,33	1,76	52,98	88,32	1,11,40
Tobacco . . . . .	11,69	27,81	25,04	27,00	42,99	43,09
All other articles . . .	97,26	1,02,62	97,58	1,71,22	3,49,18	3,50,45
Treasure . . . . .	1,02,43	68,03	59,20	Not registered.	1,35,89	1,52,61

TABLE V

TRADE OF BENGAL WITH OTHER PROVINCES AND STATES IN INDIA

(In thousands of rupees)

	By sea (exclusive of Government stores and treasure).			By rail and river.		
	1890-1.	1900-1.	1903-4.	1890-1.	1900-1.	1903-4.
<i>Imports</i> (Foreign and Indian goods) . .	3,32,37	4,60,00	4,75,33	13,46,91	21,85,86	26,36,88
Cotton, raw . . . .	49,47	5,09	7,11	1,11,65	79,39	1,58,87
„ twist and yarn . .	47,36	59,68	44,19	2,05	40,68	35,37
„ piece-goods . . .	35,24	57,67	54,83	9,29	24,03	31,69
„ other manufactures . .	1,60	2,02	2,35	...	70	7,27
Grain and pulse . . .	2,68	38,67	5,79	92,68	1,38,40	3,94,69
Hides and skins . . .	4,31	4,84	80	60,16	1,40,30	1,05,06
Metals and manufactures of metals . . . .	5,63	21,11	13,08	40,47	52,38	85,50
Oils . . . . .	9,30	74,14	1,71,38	1,60	11,15	10,07
Oilseeds . . . . .	43,52	23,12	16,52	1,43,12	2,52,46	2,88,53
Opium . . . . .	...	...	...	2,32,94	3,12,36	3,38,78
Provisions . . . . .	3,03	5,82	6,04	60,24	91,52	1,12,75
Salt . . . . .	18,12	17,58	10,55	2,61	22,24	19,08
Spices . . . . .	15,50	30,19	29,73	1,33	10,29	46,47
Sugar . . . . .	5,96	19,37	13,06	4,82	64,03	67,64
Tea . . . . .	2	8	38	3,43,60	4,66,38	5,53,36
Wood . . . . .	44,10	46,63	41,82	...	20,55	22,97
Woollen goods . . . .	68	81	29	5,70	89,10	31,83
All other articles . . .	45,85	53,18	57,41	2,34,65	3,69,90	3,26,95
Treasure . . . . .	11,10	7,46	4,27	Not registered.	3,38,66	4,21,82
<i>Exports</i> (Foreign and Indian goods) . .	5,36,76	7,16,30	6,44,68	11,93,30	19,52,91	18,05,29
Coal and coke . . . .	9,97	1,43,69	1,13,24	25,05	88,75	1,39,48
Cotton goods . . . . .	64,92	36,00	42,09	5,77,21	4,51,73	5,96,38
Grain and pulse . . . .	1,66,08	1,93,30	1,18,19	40,43	4,97,68	81,80
Jute and manufactures of jute . . . . .	1,25,59	1,25,18	1,36,59	35,65	90,20	1,41,00
Metals and manufactures of metals . . . .	11,98	12,51	18,73	1,55,69	1,58,32	1,77,26
Oils . . . . .	1,78	6,60	15,77	31,10	64,46	66,85
Provisions . . . . .	14,86	23,27	31,22	35,15	66,45	41,96
Spices . . . . .	30,41	42,99	44,47	35,82	54,83	55,62
Sugar . . . . .	2,22	2,33	1,76	52,98	88,32	1,11,40
Tobacco . . . . .	11,69	27,81	25,04	27,00	42,99	43,09
All other articles . . .	97,26	1,02,62	97,58	1,71,22	3,49,18	3,50,45
Treasure . . . . .	1,02,43	68,03	59,20	Not registered.	1,35,89	1,52,61

TABLE VII  
FOREIGN LAND TRADE OF BENGAL  
(In thousands of rupees)

	1890-1.	1900-1.	1903-4.
<i>Imports.</i> . . . . .	1,20,13	1,69,13	1,60,62
Animals . . . . .	15,18	29,10	21,28
Fruits, vegetables, and nuts . . . . .	4,31	3,23	3,00
Grain and pulse . . . . .	55,46	78,77	84,52
Hides and skins . . . . .	3,49	5,43	5,64
Oilseeds . . . . .	12,78	19,33	14,10
Provisions . . . . .	6,82	8,29	5,76
All other articles . . . . .	22,09	24,98	26,32
Treasure . . . . .	9,90	7,55	5,47
<i>Exports</i> (Indian and Foreign goods) . . . . .	99,85	1,31,75	97,20
Cotton goods . . . . .	35,21	46,19	38,77
Metals and manufactures of metals . . . . .	7,68	11,03	13,01
Provisions . . . . .	8,72	9,12	4,55
Salt . . . . .	4,44	10,24	7,19
Spices . . . . .	8,95	15,54	4,86
Sugar . . . . .	3,54	5,38	3,55
Tobacco . . . . .	3,41	7,54	2,26
All other articles . . . . .	27,90	26,71	23,01
Treasure . . . . .	2,13	64,65	3,73

TABLE VII  
FOREIGN LAND TRADE OF BENGAL  
(In thousands of rupees)

	1890-1.	1900-1.	1903-4.
<i>Imports.</i> . . . . .	1,20,13	1,69,13	1,60,62
Animals . . . . .	15,18	29,10	21,28
Fruits, vegetables, and nuts . . . . .	4,31	3,23	3,00
Grain and pulse . . . . .	55,46	78,77	84,52
Hides and skins . . . . .	3,49	5,43	5,64
Oilseeds . . . . .	12,78	19,33	14,10
Provisions . . . . .	6,82	8,29	5,76
All other articles . . . . .	22,09	24,98	26,32
Treasure . . . . .	9,90	7,55	5,47
<i>Exports</i> (Indian and Foreign goods) . . . . .	99,85	1,31,75	97,20
Cotton goods . . . . .	35,21	46,19	38,77
Metals and manufactures of metals . . . . .	7,68	11,03	13,01
Provisions . . . . .	8,72	9,12	4,55
Salt . . . . .	4,44	10,24	7,19
Spices . . . . .	8,95	15,54	4,86
Sugar . . . . .	3,54	5,38	3,55
Tobacco . . . . .	3,41	7,54	2,26
All other articles . . . . .	27,90	26,71	23,01
Treasure . . . . .	2,13	64,65	3,73



TABLE VIII. STATISTICS OF RAILWAYS IN BENGAL (*continued*)

Railway.	Total length open.	Capital expended, in thousands of rupees.	Passengers conveyed, in thousands.	Goods and minerals carried, in thousands of tons.	Gross working expenses, in thousands of rupees.	Net revenue, in thousands of rupees.	Percentage of net revenue on capital.	Percentage of net earnings to gross receipts.	Average cost of construction per mile, in thousands of rupees.
Howrah-Amra, Limited (opened 1897) . . . 1901	Miles. 29	11,97	762	Nil	1,46	1,14	9.53	43.78	42
" " " " " " " " " " " "	29	12,88	808	17	1,39	1,38	10.71	49.82	44
Howrah-Sheekhāla, Ltd. (opened 1897) . . . 1901	20	6,10	302	Nil	55	23	3.80	30.65	31
" " " " " " " " " " " "	20	6,15	343	7	52	35	5.69	40.23	30
Cooch Behar State (opened 1893) . . . 1891	...	15	...	...	...	...	...	...	41
" " " " " " " " " " " "	33.60	13,95	+	+	...	75	5.35	58.52	41
" " " " " " " " " " " "	33.60	14,91	+	+	+	+	+	+	+
Tārakeswar. . . 1891	22.23	17,29	1,126	20	1,42	1,63	9.45	53.57	81
" " " " " " " " " " " "	22.23	17,92	+	+	+	1,58	8.81	47.77	81
" " " " " " " " " " " "	22.23	17,94	\$	\$	\$	\$	\$	\$	\$
South Bihār (opened 1899) . . . 1901	79	1,23,67	\$	\$	\$	\$	2.49	59.98	1,57
" " " " " " " " " " " "	79	1,20,02	\$	\$	\$	\$	\$	\$	\$
Calcutta Port Com-missioners' . . . 1891	6.22	50,55	Nil	Nil	1,47	1,62	3.20	52.60	12,75
" " " " " " " " " " " "	7.65	97,55	Nil	750	3,19	2,22	2.27	41.10	12,75
" " " " " " " " " " " "	8.50	7,48	117	7	20	15	2.00	42.85	40
Bakhtiyarpur-Bihar . . . 1903	18.50								

... .. with F. B. S. R.

\* Amalgamated with E. I. R. Separate information not available.  
† Amalgamated with E. I. R.

Information not available. Information not furnished.

Information not furnished.

† Amalgamated with E. I. R.

TABLE VIII. STATISTICS OF RAILWAYS IN BENGAL (*continued*)

Railway.	Total length open.	Capital expended, in thousands of rupees.	Passengers conveyed, in thousands.	Goods and minerals carried, in thousands of tons.	Gross working expenses, in thousands of rupees.	Net revenue, in thousands of rupees.	Percentage of net revenue on capital.	Percentage of net earnings to gross receipts.	Average cost of construction per mile, in thousands of rupees.
Howrah-Amra, Limited (opened 1897) . . . 1901	Miles. 29	11,97	762	Nil	1,46	1,14	9.53	43.78	42
" " " " " " " " " " " "	29	12,88	808	17	1,39	1,38	10.71	49.82	44
Howrah-Sheekhāla, Ltd. (opened 1897) . . . 1901	20	6,10	302	Nil	55	23	3.80	30.65	31
" " " " " " " " " " " "	20	6,15	343	7	52	35	5.69	40.23	30
Cooch Behar State (opened 1893) . . . 1891	...	15	...	...	...	...	...	...	41
" " " " " " " " " " " "	33.60	13,95	+	+	+	+	5.35	58.52	41
" " " " " " " " " " " "	33.00	14,91	+	+	+	+	+	+	+
Tārakeswar. . . 1891	22.23	17,29	1,126	20	1,42	1,63	9.45	53.57	81
" " " " " " " " " " " "	22.23	17,92	+	+	+	1,58	8.81	47.77	81
" " " " " " " " " " " "	22.23	17,94	\$	\$	\$	\$	\$	\$	\$
South Bihār (opened 1899) . . . 1901	79	1,23,67	\$	\$	\$	\$	2.49	59.98	1,57
" " " " " " " " " " " "	79	1,20,02	\$	\$	\$	\$	\$	\$	\$
Calcutta Port Com-missioners' . . . 1891	6.22	50,55	Nil	Nil	1,47	1,62	3.20	52.60	12,75
" " " " " " " " " " " "	7.65	97,55	Nil	750	3,19	2,22	2.27	41.10	12,75
" " " " " " " " " " " "	8.50	7,48	117	7	20	15	2.00	42.85	40
Bakhtiyarpur-Bihar . . . 1903	18.50								

... .. with F. B. S. R.

\* Amalgamated with E. I. R. Separate information not available.  
† Amalgamated with E. I. R.

Information not furnished.

† Amalgamated  
‡ Separate information not available.

Private information not available.

TABLE X  
PRINCIPAL HEADS OF PROVINCIAL EXPENDITURE, BENGAL  
(In thousands of rupees)

	Average for ten years ending March 31, 1890.	Average for ten years ending March 31, 1900.	Year ending March 31, 1901.	Year ending March 31, 1904.
Opening balance . . .	31,10	31,52	38,18	55,29
Charges in respect of col- lections (principally Land Revenue and Forests) . .	49,98	61,55	66,26	69,03
Salaries and expenses of Civil Departments—				
(a) General administra- tion . . . . .	15,52	16,99	17,37	19,05
(b) Law and Justice . .	94,06	1,10,22	1,19,64	1,23,82
(c) Police . . . . .	46,37	59,86	60,65	65,72
(d) Education . . . . .	28,93	26,55	28,06	34,42
(e) Medical . . . . .	13,74	18,33	21,47	21,48
(f) Other heads . . . .	13,20	13,55	15,01	17,84
Pensions and miscellaneous civil charges . . . . .	24,46	33,00	37,27	41,70
Famine relief . . . . .	32	4,94	2,26	...
Irrigation . . . . .	49,17	52,99	49,45	52,37
Public works . . . . .	42,87	33,67	39,81	76,05
Other charges and adjust- ments . . . . .	64,73	42,24	19,93	25,19
Total expenditure	4,43,35	4,73,89	4,77,18	5,46,97
Closing balance . . . . .	29,68	31,66	42,61	1,42,52

TABLE X  
PRINCIPAL HEADS OF PROVINCIAL EXPENDITURE, BENGAL  
(In thousands of rupees)

	Average for ten years ending March 31, 1890.	Average for ten years ending March 31, 1900.	Year ending March 31, 1901.	Year ending March 31, 1904.
Opening balance . . .	31,10	31,52	38,18	55,29
Charges in respect of col- lections (principally Land Revenue and Forests) . .	49,98	61,55	66,26	69,03
Salaries and expenses of Civil Departments—				
(a) General administra- tion . . . . .	15,52	16,99	17,37	19,05
(b) Law and Justice . .	94,06	1,10,22	1,19,64	1,23,82
(c) Police . . . . .	46,37	59,86	60,65	65,72
(d) Education . . . .	28,93	26,55	28,06	34,42
(e) Medical . . . . .	13,74	18,33	21,47	21,48
(f) Other heads . . . .	13,20	13,55	15,01	17,84
Pensions and miscellaneous civil charges . . . . .	24,46	33,00	37,27	41,70
Famine relief . . . . .	32	4,94	2,26	...
Irrigation . . . . .	49,17	52,99	49,45	52,37
Public works . . . . .	42,87	33,67	39,81	76,05
Other charges and adjust- ments . . . . .	64,73	42,24	19,93	25,19
Total expenditure	4,43,35	4,73,89	4,77,18	5,46,97
Closing balance . . . .	29,68	31,66	42,61	1,42,52

TABLE XII  
INCOME AND EXPENDITURE OF MUNICIPALITIES<sup>a</sup>, BENGAL,  
INCLUDING CALCUTTA  
(In thousands of rupees)

	Average for ten years ending 1900.	1900-1.	1903-4.
<i>Income from—</i>			
Tax on houses and lands . . .	25,93	31,03	35,08
Other taxes . . . . .	39,58	48,00	54,47
Rents . . . . .	98	1,34	1,44
Loans . . . . .	18,72	4,34	50,42
Other sources . . . . .	29,22	28,62	35,53
Total income	1,14,43	1,13,33	1,82,94
<i>Expenditure on—</i>			
Administration and collection of taxes . . . . .	8,36	8,90	11,59
Public safety . . . . .	6,67	7,89	8,26
Water-supply and drainage :			
(a) Capital . . . . .	12,62	7,68	17,43
(b) Maintenance . . . . .	6,54	8,82	8,40
Conservancy . . . . .	19,55	23,38	29,29
Hospitals and dispensaries . . .	3,50	4,91	5,69
Public works . . . . .	16,97	11,82	25,48
Education . . . . .	1,40	1,35	1,73
Other heads . . . . .	37,25	45,43	62,21
Total expenditure	1,12,86	1,20,18	1,70,08

<sup>a</sup> In 1903-4 the income of the municipalities in Bengal as now constituted was Rs. 1,73,60,503, and the expenditure was Rs. 1,61,34,000.

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TABLE XIV  
STATISTICS OF EDUCATIONAL EXPENDITURE, BENGAL

Class of institutions.	Expenditure on institutions maintained or aided by public funds (in lakhs of rupees).				
	Pro- vincial revenues.	District and municipal funds.	Fees.	Other sources.	Total.
Arts and professional colleges: 1900-1	4.79	...	4.93	1.65	11.37
1903-4	5.87	...	4.92	1.94	12.73
Training and special schools*: 1900-1	3.30	0.27	0.73	2.02	6.32
1903-4	4.10	0.27	1.21	1.89	7.47
Secondary boys' schools: 1900-1	3.95	2.29	20.57	9.03	35.84
1903-4	4.42	2.42	23.21	7.94	37.99
Primary boys' schools: 1900-1	1.23	6.15	17.73	4.53	29.64
1903-4	1.66	9.63	19.70	4.44	35.43
Girls' schools: 1900-1	1.70	0.47	1.62	2.89	6.68
1903-4	2.07	0.92	1.75	2.69	7.43
Total { 1900-1	14.97	9.18	45.58	20.12	89.85
1903-4	18.12	13.24	50.79	18.90	101.05

In 1903-4 the corresponding expenditure (in lakhs of rupees) in Bengal as now constituted was:—

Class of institutions.	Pro- vincial revenues.	District and municipal funds.	Fees.	Other sources.	Total.
Arts and professional colleges . . .	5.61	...	4.17	1.70	11.48
Training and special schools . . .	3.44	0.10	0.73	1.53	5.80
Secondary boys' schools* . . .	2.70	1.64	14.50	4.85	23.69
Primary boys' schools* . . .	1.27	6.67	13.06	3.09	24.09
Girls' schools* . . .	0.89	0.51	0.36	1.70	3.46
Total	13.91	8.92	32.82	12.87	68.52

\* Excluding figures for European schools.

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TABLE XVI

STATISTICS OF HOSPITALS, LUNATIC ASYLUMS, AND VACCINATION,  
BENGAL.

	1881.	1891.	1901.	1903.	1903, present area.
<i>Hospitals, &amp;c.*</i>					
Number of civil hospitals and dispensaries . . .	237	283	567	614	375
Average daily number of—					
(a) In-patients . . .	2,091	2,652	3,456	3,524	2,970
(b) Out-patients . . .	9,395	12,160	25,970	29,227	18,847
Income from—					
(a) Government payments . . Rs.	3,74,773	3,47,445	8,74,616	8,10,505	7,56,740
(b) Local and municipal payments . . Rs.	1,93,402	3,65,384	7,09,911	7,84,440	6,04,858
(c) Fees, endowments, and other sources . Rs.	3,25,684	2,97,358	6,63,872	9,67,968	6,91,726
Expenditure on—					
(a) Establishment . . Rs.	4,09,803	4,37,662	8,22,629	8,91,289	7,09,513
(b) Medicines, diet, buildings, &c. . Rs.	4,02,783	5,20,221	12,50,347	14,30,758	11,93,019
<i>Lunatic Asylums.</i>					
Number of asylums . . .	6	6	6	6	5
Average daily number of—					
(a) Criminal lunatics . .	277	455	517	543	391
(b) Other lunatics . . .	616	580	469	510	391
Income from—					
(a) Government payments . . Rs.	87,479	92,165	1,18,960	1,16,357	91,344
(b) Fees and other sources . Rs.	28,464	27,985	20,556	20,408	19,236
Expenditure on—					
(a) Establishment . . Rs.	55,633	43,978	45,769	46,649	38,554
(b) Diet, buildings, &c. . Rs.	60,310	76,173	93,747	90,116	72,026
<i>Vaccination.†</i>					
	1880-1.	1890-1.	1900-1.	1903-4.	Not ascertainable.
Population among whom vaccination was carried on . . .	36,892,735	62,782,913	73,843,197	77,624,647	
Number of successful operations . . .	1,363,925	1,805,096	2,248,015	2,662,477	
Ratio per 1,000 of population . . .	37	28	30	34	
Total expenditure on vaccination . . . Rs.	1,11,066	1,82,400	1,88,114	2,03,281	
Cost per successful case . Rs.	0-1-3	0-1-7	0-1-4	0-1-2	

\* The figures for hospitals, &amp;c., include the institutions in Calcutta.

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The principal rivers of Berār are the TĀPTI, the PŪRNA, the WARDHĀ, and the PENGANGĀ. The Tāpti runs from east to west and the Pengangā from west to east, each following the general declination of the range from which it receives its principal affluents. The Wardhā rises in the Sātpurās and flows in a southerly direction, receiving the Pengangā at the south-eastern corner of the province. The Pūrna, which is a tributary of the Tāpti, drains the Pāyānghāt, rising in the lower slopes of the Gāwilgarh hills in Amraotī District, and running westward through the valley until it leaves the province at the northernmost corner of the Malkāpur *tāluk*. The Pengangā rises in the hills near Deūlgāt in Buldāna District, traverses that District in a south-easterly direction, and enters the Bāsim *tāluk* near Wākad. From Yeotī eastwards it forms the southern boundary of Berār till it meets the Wardhā at Jugād. Its prinicpal tributaries are the Pūs, Arna, Arān, Wāghārī, Kūnī, and Vaidarbha, which rise in the Bālāghāt and flow to meet it in a south-easterly direction.

The only lake in Berār is the salt lake of LONĀR in Buldāna District.

The scenery of the Pāyānghāt is monotonous and uninteresting. The wide expanse of black cotton soil, slightly undulating, is broken by few trees except *babūls* and groves near villages. In the autumn the crops give it a fresh and green appearance ; but after the harvest the monotonous scene is unrelieved by verdure, shade, or water, and the landscape is desolate and depressing. The Bālāghāt is more varied and pleasing, though here also the country has a parched and arid appearance in the hot season. The ground is less level and the country generally is better wooded. It stretches in parts into downs and dales, or is broken up into flat-topped hills and deep ravines, while in its eastern section the country is still more sharply featured by a splitting up of the main hill range, which has caused that variety of low-lying plains, high plateaux, fertile bottoms, and rocky wastes found in Wūn District. The scenery of the Melghāt is yet more picturesque, the most striking features of this tract being the abrupt scarps of trap rock near the summits of the hills, the densely wooded slopes, and the steep ravines. The undulating plateaux are rarely of great extent.

<sup>1</sup> With the exception of the south-eastern corner, comprising a portion of Wūn District, the whole of Berār is covered by the Deccan trap flows. In the south-eastern corner the trap has been removed by atmospheric agencies, exposing small patches of the underlying Lameta beds, and the great Godāvari trough of Gondwāna rocks, which are let down into very old unfossiliferous Purāna strata, are regarded as pre-Cambrian in age, and are known in other parts of peninsular India as Vindhya, Cuddapahs, &c. The Deccan trap is itself covered with

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the river for the purpose of obtaining brine from the gravelly layers. The absence of fossils supports the idea that the salt is not derived from marine beds, but is in all probability due to the concentration of the salts ordinarily carried in underground water through the excessive surface evaporation which goes on in these dry areas for most of the year<sup>1</sup>.

<sup>2</sup> The Melghāt hills are forest-clad, the constituent vegetation being that characteristic of the Sātpurās generally. The most plentiful species is *Boswellia*, accompanied by *Cochlospermum*, *Anogeissus latifolia*, and *Lagerstroemia parviflora*. Where the soil is deeper more valuable species, such as *Tectona grandis*, *Dendrocalamus strictus*, and, more sparingly, *Hardwickia binata*, are found occupying the valleys and ravines. Scattered throughout the forest occur *Ougeinia dalbergioides*, *Adina cordifolia*, *Stephegyne parvifolia*, *Terminalia tomentosa*, *Schrebera swietenoides*, *Eugenia Jambolana*, *Bridelia retusa*, *Terminalia Chebula*; some heavy creepers, such as *Bauhinia Vahlüi*; and species of *Millettia*, *Combretum*, *Vitis*, &c. On lighter gravelly soil, both in Northern and Southern Berār, forests with *Hardwickia binata* are met with. *Pterocarpus Marsupium* occurs near the edges of most of the high plateaux, with occasional trees of *Dalbergia latifolia*.

Where the soil in the Bālāghāt is thin, the slopes and plateaux are covered chiefly with *Boswellia*; but in deeper soil *Anogeissus latifolia*, *Diospyros melanoxylon*, and *Terminalia tomentosa* are the principal species. Along river banks considerable quantities of *Terminalia Arjuna* and *Schleichera trijuga* are sometimes met with. In the bottoms of the ravines are scattered clumps of *Dendrocalamus strictus*. The hills are often bare and grass-clad, the most striking species being large Andropogons, Anthistirias, Iseilemas, &c. In level tracts, mangoes, tamarinds, *mahuās*, and *pīpals* abound, with groves of *Phoenix sylvestris*. Stretches of *babūl* jungle are characteristic of the province. In cultivated ground the weed vegetation is that characteristic of the Deccan, and includes many small *Compositae*.

The principal wild animals are the tiger, the leopard, the hunting leopard, and the wild cat among *Felidae*. Deer and antelopes are represented by the *sāmbar*, the spotted deer, the barking-deer, the common Indian antelope, the *mīlgai*, the four-horned antelope, and the *chinkāra*; and *Canidae* by the Indian wolf, the Indian fox, the wild dog, and the jackal. The striped hyena, the wild hog, and the Indian black or sloth bear are of frequent occurrence, the last especially in the Melghāt. Monkeys are represented by the *langūr*

<sup>1</sup> *Memoirs, Geological Survey of India*, vol. xiii; *Records, Geological Survey of India*, vol. i, part iii; *General Report of the Geological Survey of India* (1902-5).

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<sup>2</sup> From a note supplied by Major D. Prain, I.M.S., Director of the Botanical Survey.

The next mention of Vidarbha is in connexion with the famous Oriental romance of Nala and Damayantī. Nala, Rājā of Nishadha (Mālwa), loved Damayantī, the daughter of Bhīma, Rājā of Vidarbha. It is unnecessary to pursue this story, which is mainly mythical, through its intricacies of detail; but we learn from it that the kingdom of Vidarbha had for its capital a city of the same name, with which the city of Bīdar in the Nizām's Dominions has been identified. If the identification be correct, and it is supported by legend as well as by etymology, we may conclude that the ancient kingdom was far more extensive than the modern province of Berār. Tradition says that its kings bore sway over the whole of the Deccan.

The authentic history of Berār commences with the Andhras or Sātavāhanas, of whose dominions it undoubtedly formed part. In the third century B.C., the Andhras occupied the deltas of the Godāvāri and Kistna, and were one of the tribes on the outer fringe of Asoka's empire. Soon after the death of that great ruler their territory was rapidly enlarged, and their sway reached Nāsik. The twenty-third king, Vilivāyakura II (A.D. 113-38), successfully warred against his neighbours, the western Satraps of Gujarāt and Kāthiāwār, whose predecessors had encroached on the Andhra kingdom. A few years later, however, the Satraps were victorious and the Andhra rule appears to have come to an end about 236. The next rulers of the province of whom records have survived were the Rājās of the Vākātaka<sup>1</sup> dynasty, of whom there were ten. This dynasty was probably feudatory to the Vallabhīs, but their chronology is very uncertain. The Abhīras or Ahīrs, who succeeded the Vākātakas, are said to have reigned as independent sovereigns for only sixty-seven years; but Ahīr and Gaoli chieftains continued long afterwards to hold important forts in Berār and the neighbouring country, giving their names to their strongholds, as in the case of Gaoligarh in Khāndesh, Asīrgarh (Asa Ahīr Garh) in the Central Provinces, and Gāwilgarh in Berār. The Chālukyas next rose to power in the Deccan. Their dominions included Berār, and they reigned until 750, when they were overthrown by the Rāshtrakūtas, who ruled till 973, when the Chālukyas regained their ascendancy, which they retained, though not without vicissitudes, for two centuries. On the death, in 1189, of Somesvara IV, the last Rājā of the restored Chālukya line, his dominions were divided between the Hoysala Ballālas of the south, whose capital was Dorasamudra or Dwārāvati-pura<sup>1</sup>, and the Yādavas of Deogiri, the modern Daulatābād, Berār naturally falling to the share of the latter. Rājā Bhīllama I, the founder of this dynasty, established himself at Deogiri in 1188; and the Yādavas had reigned with some renown for rather more than a century, when, in

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These salutary reforms came too late to save the Bahmani dynasty from ruin ; and in the reign of the fourteenth Sultān, Mahmūd Shāh II, the principal *tarafdārs*, or provincial governors, proclaimed their independence. Imād-ul-mulk, who had formerly been governor of the whole of Berār and now held Gāwīl, proclaimed his independence in 1490 and soon annexed Māhūr to his kingdom. He was by race a Kanarese Hindu, who had been made captive as a boy in one of the expeditions against Vijayanagar and brought up as a Musalmān by the governor of Berār, to whose place he ultimately succeeded. Imād-ul-mulk died in 1504 and was succeeded by his son Alā-ud-dīn Imād Shāh, who made Gāwīlgarh his capital and waged fruitless war against Amīr Barīd of Bīdar and Burhān Nizām Shāh of Ahmadnagar. Alā-ud-dīn was succeeded on his death in 1529 by his son Daryā Imād Shāh, and he, after a peaceful and uneventful reign, by his son Burhān Imād Shāh (1560-1). This prince, shortly after his accession, was imprisoned in Narnāla by his minister, Tufāl Khān, who declared himself independent. In 1572 Murtazā Nizām Shāh of Ahmadnagar invaded Berār with the avowed intention of releasing Burhān from confinement. Tufāl Khān, his son Shams-ul-mulk who had surrendered Gāwīlgarh, and Burhān were captured shortly afterwards, and were imprisoned and put to death. Thus ended the rule of the Imādshāhi dynasty in Berār, after a duration of eighty-five years.

The Ahmadnagar dynasty was not long destined to hold possession of the prize. At home it could do nothing to quell civil broils and allay dangerous feuds. Even when the famous Chānd Bibī became queen-regent there was no chance of upholding a tottering state. In 1595 Sultān Murād, the fourth son of the emperor Akbar, besieged Ahmadnagar, but raised the siege, early in 1596, on receiving the formal cession of Berār.

In those times the Deccan swarmed with adventurers from every nation in Asia and even from the African coast of the Indian Ocean. These men and their descendants settled in the towns, and their chiefs occupied most of the high military and civil offices ; but the Musalmān rulers of the Deccan did nothing to disturb the routine of ordinary revenue collections and the administration of the internal affairs of villages and *parganas*, so that the old Hindu organization, with its hereditary *pargana* and village officials, the relic, perhaps, of a civilization older still, was allowed to remain, recognized by the conquerors as a more convenient administrative machine than any which they could devise. There are now in Berār several Muhammadan families of *deshmukhs* (former *pargana* officials) ; but they are all believed, and for the most part admit themselves, to be descendants of Hindus who in the reign of Aurangzeb accepted Islām in preference to relinquishing their hereditary offices. They may be distinguished from other Musal-

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government was still in the hands of the two Saiyids. Chīn Kilij Khān, afterwards known as Asaf Jāh, who had distinguished himself in the later wars of Aurangzeb, had been appointed viceroy of the Deccan under the title of Nizām-ul-mulk, but was opposed by the court party at Delhi, who sent secret instructions to Mubārīz Khān, governor of Khāndesh, urging him to withstand Asaf Jāh by force of arms. In 1724 a battle was fought at Shakarkhelda in Buldāna District, in which Mubārīz Khān was utterly defeated. This battle established the virtual independence of Asaf Jāh, the founder of the line of the Nizāms of Hyderābād, who, to celebrate his victory, renamed the scene of it FATHKHELDA, or 'the village of victory'; and from that day Berār has always been nominally subject to the Nizām. The Bhonsla Rājās of Nāgpur posted their officers all over the province; they occupied it with their troops; they collected more than half the revenue, and they fought among themselves for the right to collect; but the Nizām constantly maintained his title as *de jure* ruler of the country, with the exception of Mehkar and some *parganas* to the south, which were ceded to the Peshwā in 1760 after the battle of Udgīr, and Umarkhed and other *parganas* ceded in 1795 after the battle of Kardla. This struggle between Mughal and Marāthā for supremacy in Berār commenced in 1737 between Asaf Jāh and Raghuji Bhonsla. It ended in 1803, when, after the defeat of the Marāthā confederacy at Assaye and Argaon, and the capture of Gāwīlgarh by General Arthur Wellesley, the Bhonsla Rājā signed a treaty by which he resigned all claim to territory and revenue west of the Wardhā, Gāwīlgarh and Narnāla, with a small tract of land afterwards exchanged, remaining in his possession.

The injury caused to Berār by the wars of the eighteenth century must have been wide and deep. Described in the *Ain-i-Akbarī* as highly cultivated and in parts populous, supposed by M. de Thevenot in 1667 to be one of the wealthiest portions of the Mughal empire, it fell on evil days before the close of the seventeenth century. Cultivation fell off just when the finances were strained by the long wars; the local revenue officers rebelled; the army became mutinous; and the Marāthās easily plundered a weak province when they had severed its sinews by cutting off its trade. Wherever the Mughals appointed a collector the Marāthās appointed another, and both claimed the revenue, while foragers from each side exacted forced contributions, so that the harassed cultivator often threw up his land and helped to plunder his neighbour. The Marāthās by these means succeeded in fixing their hold on the province; but its resources were ruined, and its people were seriously demoralized by a régime of barefaced plunder and fleecing without the semblance of principle or stability.

By the partition treaty of Hyderābād (1804) the Berār territories ceded by the Bhonsla Rājā were made over to the Nizām. Some

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Messrs. Pestonji & Co. These were enterprising Pārsī merchants, who in 1825-6 made the first considerable exportation of cotton from Berār to Bombay. They gave liberal advances to cotton-growers, set up presses at Khāmgaon and other places, and took up, generally, the export of produce from the Nizam's country. In 1841 Chandū Lāl, the Hyderābād minister, gave them large assignments of revenue in Berār in repayment of loans to the State; but in 1843 the minister resigned, having conducted the State to the verge of bankruptcy, and Pestonji was subsequently forced to give up his Berār districts.

All these proceedings damaged the State's credit, as Chandū Lāl's financing had hampered its revenue; and in 1843 and several succeeding years the pay of the Irregular Force maintained under the treaty of 1800 had to be advanced by the British Government. In 1850 it had fallen again into heavy arrears, and in 1853 the debt due to the British Government on account of this pay and other unsatisfied claims amounted to 45 lakhs. The bankruptcy of the State disorganized the administration, and the non-payment of the troops continued to be a serious political evil. Accordingly, in 1853, a new treaty was concluded with the Nizām, under which the Hyderābād Contingent was to be maintained by the British Government, while for the payment of this force, and in satisfaction of the other claims, districts yielding a gross revenue of 50 lakhs were assigned to the Company. The Berār districts 'assigned' by this treaty are now popularly understood to form the province of Berār, which was administered on behalf of the Government of India by the Resident at Hyderābād, though they coincide in extent neither with the Berār of the Nizāms nor with the imperial *Sūbah*. The territory made over under this treaty comprised, besides Berār, the districts of Dhārāseo and the Raichūr Doāb. It was agreed that accounts should be annually rendered to the Nizām, and that any surplus revenue should be paid to him. His Highness was released from the obligation of furnishing a large force in time of war, and the Contingent ceased to be a part of his army, and became an auxiliary force kept up by the British Government for his use.

The provisions of the treaty of 1853, which required the submission of annual accounts to the Nizām, were, however, productive of much inconvenience and embarrassing discussions. Difficulties had also arisen regarding the levy of customs duties under the commercial treaty of 1802. To remove these difficulties, and at the same time to reward the Nizām for his services in 1857, a new treaty was concluded in 1860, by which a debt of 50 lakhs due from him was cancelled; and he also received the territory of Sūrāpur, which had been confiscated for the rebellion of the Rājā; and the districts of Dhārāseo and Raichūr were restored to him. On the other hand, he ceded certain districts on the left bank of the Godāvari, traffic on which river was to be free

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There was, however, an increase in trade, cultivation, and manufactures, and the population rose by 8 per cent. The ten years preceding 1901 were not, owing to natural causes, marked by a general increase in prosperity, but the province displayed considerable stability and power of resistance. There was but one year in the decade, 1898, which could be described as very favourable, and even then the *rabi* crops partially failed. The other nine years were marked by unseasonable or deficient rainfall, poor harvests, sickness, and high mortality, culminating in 1899 and 1900, when famine was sore in the land. The population decreased by 5 per cent. during the decade. But, notwithstanding all this, other statistics show steady progress and development. Cultivation has extended; the value of the import and export trade has increased; and the number of steam factories has risen by 84 per cent.

It had gradually become apparent since 1860 that the maintenance of the Hyderābād Contingent on its old footing as a separate force was inexpedient and unnecessary, and also that the administration of so small a province as Berār as a separate unit was very costly. In 1902, therefore, a fresh agreement was entered into with the Nizām. This agreement reaffirmed His Highness's rights over Berār, which, instead of being indefinitely 'assigned' to the Government of India, was leased in perpetuity on an annual rental of 25 lakhs; and authorized the Government of India to administer the province in such manner as it might deem desirable, as well as to redistribute, reduce, reorganize, and control the Hyderābād Contingent, due provision being made, as stipulated in the treaty of 1853, for the protection of His Highness's dominions. In pursuance of this agreement the Contingent ceased, in March, 1903, to be a separate force, and was reorganized and redistributed as an integral part of the Indian army.

In October, 1903, Berār was transferred to the administration of the Chief Commissioner of the Central Provinces. For the present the rental paid to the Nizām is charged with an annual debit of 10 lakhs, towards the repayment of loans made by the Government of India for famine expenditure in Berār and for famine and other expenditure in the Hyderābād State. When these loans have been repaid, the Nizām will receive the full rent of 25 lakhs. The advantages secured to him by the new agreement are manifest. His rights over Berār have been reaffirmed, and he will receive 25 lakhs per annum, compared with a sum of between 8 and 9 lakhs which was the average surplus paid to him under the former treaties.

The principal remains of archaeological or historical interest in Berār are the small cave monastery and the shrine of Shaikh Bāba at PĀTŪR; the *chhatrī* of Rājā Jai Singh and the fort at BĀLĀPUR; various massive stone temples attributed to the era of the Yādava Rājās of Deogiri, and locally known as Hemādpantī temples, in the Chālukyan style; some

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## DISTRIBUTION OF POPULATION IN BERĀR, 1901

District.	Area in square miles.	Number of towns.	Number of villages.	Total Population.			Urban Population.			Persons per square mile in rural areas.
				Persons.	Males.	Females.	Persons.	Males.	Females.	
Amraoti . . . . .	2,759	15	1,037	630,118	322,924	307,194	135,173	70,706	64,467	179
Akola . . . . .	2,678	10	966	582,540	295,917	286,623	124,158	64,005	60,153	134
Ellichpur . . . . .	2,605	6	788	297,493	159,820	146,583	64,476	32,751	31,725	81
Buldāna . . . . .	2,809	6	870	423,616	211,739	211,877	41,430	21,296	20,134	136
Wān . . . . .	3,910	4	1,205	466,929	235,638	231,291	27,856	14,775	13,081	112
Bāsim . . . . .	2,949	3	824	353,410	177,262	176,148	26,358	13,461	12,897	111
Total	17,710	44	5,710	2,754,016	1,394,300	1,359,716	419,451	216,994	202,457	132

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Ellichpur . . . . .	2,605	6	788	297,493	159,820	146,583	64,476	32,751	31,725	81
Buldāna . . . . .	2,809	6	870	423,616	211,739	211,877	41,430	21,296	20,134	136
Wān . . . . .	3,910	4	1,205	466,929	235,638	231,291	27,856	14,775	13,081	112
Bāsim . . . . .	2,949	3	824	353,410	177,262	176,148	26,358	13,461	12,897	111
Total	17,710	44	5,710	2,754,016	1,394,300	1,359,716	419,451	216,994	202,457	132

commercial element in a *tāluk*, the less is the proportion of females to males.

The following table gives statistics of civil condition for 1891 and 1901 :—

Civil condition.	1891.			1901.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
Unmarried .	943,040	572,594	370,446	897,929	552,329	345,600
Married . .	1,644,458	833,575	810,883	1,508,454	752,746	755,708
Widowed . .	309,993	85,657	224,336	347,633	89,225	258,408
Total	2,897,491	1,491,826	1,405,665	2,754,016	1,394,300	1,359,716

Of the male population 40, 54, and 6 per cent., and of the female 25, 56, and 19 per cent. are single, married, and widowed respectively. Married males and females are fairly evenly balanced, so that it is evident that polygamy, though permitted by all the religions the followers of which are numerically important, is but sparingly practised. No relics of polyandry survive. Widow remarriage is prohibited, not only among the higher castes of Hindus, but also among the well-to-do in inferior castes, such as members of *deshmukh* families among Kunbīs. It is allowed and extensively practised among most of the agricultural castes, and is known as *pāt* or *mohtur*, in contradistinction to *lagna*, a word which is applied only to the marriage of a virgin bride. Among some tribes, Banjārās and Gonds for example, the levirate prevails, i. e. it is the duty of a man to take to wife the widow of his deceased elder brother, though to marry a younger brother's widow would be regarded as incestuous. Child marriage is the general rule among the higher castes of Hindus. Animists usually defer marriage until after the attainment of puberty, and allow greater freedom of choice to the parties concerned.

The joint-family system is the rule among Hindus in Berār. Ignorant Musalmāns too will assert in civil suits that they are members of an undivided family when they believe that the assertion may suit their interests.

Marāthī is spoken by nearly 80 per cent. of the population. The Musalmāns, 212,000 in number, speak a corrupt dialect of Urdū, popularly known as Musalmānī; other dialects of Western Hindī, returned as Hindī and Hindustānī, are spoken by immigrants from the United and Central Provinces. The Mārwarī dialect of Rājasthānī was spoken in 1901 by 41,521 traders and bankers from Mārwar. Gipsy dialects, of which Banjārī or Labhānī is the most important, were spoken by 68,879 persons. Of Dravidian languages Gondī and its dialects, of which the principal is Kolāmī, were spoken by 83,217 persons, and Telugu by 85,431, mostly dwellers in the south of Wūn

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	1891.		1901.	
	Persons.	Percentage.	Persons.	Percentage.
Hindus . . .	2,531,791	87.3	2,388,016	86.7
Animists . . .	137,108	4.7	129,964	4.7
Musalmāns . . .	207,681	7.1	212,040	7.6
Christians—				
Native . . .	711	0.2	1,748	0.06
Other . . .	648	0.2	627	0.02
Others . . .	19,552	0.6	21,621	0.7

Of all the gods of the Hindu pantheon Mahādeo and Māruti (Hanumān) probably receive the most attention. The latter has a shrine in every village. The cultivator propitiates Khāt Deo, the fertilizing god, who has his habitation in a white stone set up in a field, and local gods such as Chindiya Deo, 'the lord of tatters,' are worshipped. The 'godlings of disease' are propitiated as occasion arises. The only heterodox sect which calls for notice is that of the Mahānubhavas, or black-robed devotees, of whom a description is given in the account of RĪTPUR, their principal place of pilgrimage. This movement, which is a protest against polytheism, Brāhmanism, and, in a less degree, the caste system, is rapidly declining. Islām presents no extraordinary features in Berār. Here, as elsewhere in India, the Musalmān villager has borrowed or inherited from his Hindu neighbour or ancestor many practices which precisians would condemn as superstitious. The Gonds and Korkūs, though still Animists, are tinged with Hinduism and worship Mahādeo as well as other Hindu gods, and the Korkūs worship also their own ancestors, both male and female.

The oldest Hindu temples of Berār are the Hemādpanti, already referred to. More recent temples have no distinctive features. In mosques examples of both the Pathān and the Mughal styles are found.

There are 14 Christian missions at work in the province—two Roman Catholic, one Church of England, and eleven other Protestant, among whom the Methodists and Presbyterians are the most important. The activity of these missions is evidenced by the fact that native Christians more than doubled in number between 1891 and 1901. The Christian missionaries did excellent work in the famines of 1896-7 and 1899-1900. For purposes of ecclesiastical jurisdiction Berār is in the Anglican and Roman Catholic dioceses of Nāgpur. Of the Christians in 1901, 888 belonged to the Roman, and 626 to the Anglican Church.

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The higher castes among the Hindus burn their dead; Musalmāns, Hindus of the lower castes, and aboriginal tribes bury them. The Korkūs erect posts of teak, curiously carved, at the heads of graves. Among the Mahānubhavas and some other orders of ascetics the dead are buried in salt, in a sitting posture.

The tastes of the agriculturist are principally domestic; he has few amusements beyond his family circle except the enjoyment of village gossip, a weekly trip to the nearest market village, an occasional visit to a *jaṭra* or religious fair, or, more rarely, a pilgrimage to a shrine of more than local celebrity.

The principal festivals observed are the Māndosī, the Akshayyatritya, the Nāgapanchamī, the Polā, the Mahālakshmi, the Pitraksha, or feast to *manes* of male ancestors, the Dasara, the Divālī, the Sivarātrī, and the Shimgā or Holī. The three most important feasts to the cultivator are the Holī, the Polā, and the Dasara; and at these burning questions of social precedence, often ending in criminal complaints, arise between different branches of the families of *pāṭels* or hereditary headmen of villages. At the Polā festival the plough cattle are worshipped. A rope called *toran* is then stretched across two upright poles, and the cattle of the villagers, gaily decorated, are led beneath it, headed by those belonging to members of the *pāṭel's* family in the order of their seniority.

Hindus of all castes in Berār have three names. The first is the personal name and corresponds to the Christian name of a European, the second is the father's personal name, and the third is the family surname. Thus Ganpat Raoji Sindhya would be Ganpat, the son of Raoji, of the Sindhya family or clan.

The three natural divisions of Berār have already been described. The Melghāt or northern division is extremely rugged, and is broken into a succession of hills and deep valleys. The hilly portion consists of basaltic and calcareous rock, and the soil in the valleys and ravines is a light brown alluvium, overlying basalt accumulated from superficial rainwash from the hills. This light-brown soil, extending to about 8 or 10 miles from the foot of the hills towards the valley of the Pūrna, is cultivable, but is less rich than the soil of the valley itself. The Bālāghāt, or southern division, is formed of undulating high land of the Deccan trap. The plateaux are covered with fairly rich soil, and the soil of the intermediate valleys is an alluvium of loam of remarkably fine quality and very suitable for wheat.

The Pāyānghāt, or central valley of Berār, contains the best land in

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Weeding is commenced when the soil dries during the first break in the rains. It is done with the *daora*, a two-bladed hoe which is drawn by two bullocks, and removes the weeds from two of the interstices between the rows of plants at once, the weeds growing among the plants being removed by hand. Three or four weedings in a season are generally considered sufficient, but the more industrious cultivators often use the hoe every fortnight until the crop is sufficiently strong to smother all surface weeds.

Cotton pods are usually ready for picking about the end of October, and this light work is generally done by women and children. Payment is, as a rule, made in kind, each labourer receiving from one-twelfth to one-eighth of the day's picking. From the short staple variety of cotton which the Berār cultivator now grows he can obtain, if the crop is good, from five to seven pickings at intervals of fifteen or twenty days; but the superior *bani* and *jari* varieties, the latter of which is now extinct in Berār, will not yield a second picking under a month, and the crop is generally exhausted in three pickings. The cultivator finds that the short staple is easier to raise and pays him just as well, for although he gets a lower price the crop is more plentiful.

Before the establishment of ginning factories in the province almost every cultivator had his own seed for sowing cleaned by hand. Ginning by steam-power was first introduced in 1887-8, in which year there were only four factories working. In 1901 these had increased to 121, and there is every prospect of a further development of this industry.

*Jowār* ripens early in December, and is reaped by men, the ears being afterwards separated from the stalks by women. The stalks, called *kadba* or *kadbi*, are stacked, and furnish the principal fodder-supply for cattle. The ears are conveyed to the threshing-floor, where bullocks tread out the grain, moving round a central pole. Six bullocks can thresh a *hhandi* (about 14 cwt.) in two days. The threshed grain is winnowed in a breeze. One man stands on a tripod, while another hands up to him a basketful of grain from the threshing-floor. As he slowly empties the basket, the chaff is carried away by the wind and the grain falls to the ground.

Of the total population of Berār in 1901, 73.2 per cent. were supported by agriculture. The figures are as follows:—

Persons interested in land, landholders, tenants, co-sharers, &c. .	561,912
Agricultural labourers, &c. . . . .	1,452,221
Growers of fruit, vegetables, &c. . . . .	586
Total	<u>2,014,719</u>

The principal crops in the order of their importance are cotton, *jowār*, wheat, linseed, gram, *tuar* or *arhar*, and sesamum. *Jowār* and wheat are the staple food-grains, rice and *bājra*, and, among pulses, *tuar*

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Little is done towards the improvement of the quality of crops by selection of seed or by the introduction of new varieties, and there is no experimental farm in the province. As already remarked, the cultivator has allowed the quality of the cotton crop to deteriorate in order to obtain a greater yield. Seed separated from the fibre by the steam-ginning process is said to be less fecund than the seed of hand-ginned cotton.

A department of Land Records and Agriculture was formed in 1891, but its work has hitherto been confined to survey and settlement.

The benefits of the Agriculturists' Loans Act and the Land Improvement Loans Act are naturally appreciated most highly in years of scarcity and famine. The delay in disbursing loans allowed under these Acts was for a long time an obstacle in the way of their popularity, but experience gained in years of famine has led to the simplification of procedure; and there seems to be a fair field for the success of agricultural banks.

The very few horses in Berār are inferior animals and merit no notice. Ponies are more numerous, but are weedy. An attempt was made by Government for a few years to improve the breed by keeping Arab stallions at the head-quarters of Districts, but was abandoned about 1893 as a failure. The breed of cattle proper to the province is known as Gaorani or Berāri, of which there are two distinct varieties, the Umarda and the Khāmgaon, the former being the smaller. Animals of this breed are hardy, active, and enduring, and can easily cover 30 miles within six or eight hours. A pair will sometimes cover 40 or 50 miles in a day. The Khāmgaon breed is more adapted to heavy draught. This breed is found in the Khāmgaon, Bālāpur, Chikhli, Jalgaon, and part of the Akot *tāluka*; the Umarda breed elsewhere. Indiscriminate crossing, the neglect of stock cattle, and fodder famines have contributed to the deterioration of both breeds. On the eastern borders there are very distinct indications of the influence of the Arvi or Gaulgani breed, and on the southern border of that of the breeds of cattle found in the Nizām's Dominions. The recent prevalence of famine has necessitated the importation of working, and, to a smaller extent, of milch cattle. The breeds most commonly imported have been the Nimāri, Sholāpuri, Labbāni, and Hoshangābādi; cattle of the Mālwi, Gujarāti, and Surati breeds are less frequently seen.

Buffaloes in the north and east of the province are of the Nāgpuri, and elsewhere of the Dakhani breed. Since the famine of 1899-1900 buffaloes have been imported from Central India. These, which are distinguished by the comparative smallness of their heads and horns, are locally known as Mālwi. The sheep and goats are inferior animals,

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is from Rs. 300 to Rs. 500 when specially expensive blasting operations have not to be undertaken, or from Rs. 10 to Rs. 15 per foot of depth; and the area irrigated by a single well is about four acres. The depth of permanent wells varies from 20 to 90 feet. Temporary wells, such as those found in Gujarāt, are not in use in Berār, as the water is not sufficiently near to the surface; but excavations known as *jhiras* are very commonly made in the beds of streams, in the hot season, for the purpose of obtaining drinking-water.

### STATISTICS OF AGRICULTURE IN BERĀR

(In square miles)

	1881-90 (average).	1891-1900 (average).	1900-1.	1903-4.
Total area . . . . .	17,715	17,737	17,744	17,763
Total uncultivated area . . . . .	7,489	7,479	5,211	4,650
Cultivable, but not cultivated . . . . .	2,830	2,604	1,270	2,181
Uncultivable . . . . .	4,659	4,890	384	378
Total cultivated area . . . . .	10,226	10,258	10,651	11,465
Irrigated from canals . . . . .	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>
"    "    wells . . . . .	66	85	106	58
"    "    other sources . . . . .	2	2	1	1
Total irrigated area . . . . .	68	87	107	59
Unirrigated area . . . . .	10,158	10,171	10,544	11,406
<i>Cropped area.*</i>				
Rice . . . . .	35	57	80	54
Wheat . . . . .	1,346	926	389	707
<i>Jowār</i> . . . . .	3,405	3,594	4,520	4,414
Pulses . . . . .	849	786	798	929
Oilseeds . . . . .	964	732	580	606
Cotton . . . . .	3,266	3,302	3,819	4,455
Condiments and spices . . . . .	47	49	93	68
Orchard and garden produce . . . . .	24	37	65	44
Tobacco . . . . .	36	27	25	23
Miscellaneous . . . . .	254	202	288	193

NOTE.—Up to 1896 the figures are for the year ending March 31, and subsequently for the year ending July 31.

\* This includes the area double cropped, which amounted to only 5 square miles in 1900-1, and to 30 square miles in 1903-4.

Berār being settled on the *ryotwāri* system, the rent of a cultivator may ordinarily be taken as the land revenue paid by him to Government. In the comparatively few villages held under other tenures, the holder of the village is not in any way restricted by legislation as regards the rent which he is entitled to demand, except that in *ijāra* villages those tenants who occupied their holdings when the village was leased are entitled to hold at rates not exceeding those demanded by Government for similar land in adjacent *khālsa* villages. This privilege is restricted to land actually held before the lease. The control of rent by legislation has not been found necessary, for rack-renting is impossible at present. Statistics of rent actually paid in alienated villages are not

Rents, wages,  
and prices.

is from Rs. 300 to Rs. 500 when specially expensive blasting operations have not to be undertaken, or from Rs. 10 to Rs. 15 per foot of depth; and the area irrigated by a single well is about four acres. The depth of permanent wells varies from 20 to 90 feet. Temporary wells, such as those found in Gujarāt, are not in use in Berār, as the water is not sufficiently near to the surface; but excavations known as *jhiras* are very commonly made in the beds of streams, in the hot season, for the purpose of obtaining drinking-water.

### STATISTICS OF AGRICULTURE IN BERĀR

(In square miles)

	1881-90 (average).	1891-1900 (average).	1900-1.	1903-4.
Total area . . . . .	17,715	17,737	17,744	17,763
Total uncultivated area . . . . .	7,489	7,479	5,211	4,650
Cultivable, but not cultivated . . . . .	2,830	2,604	1,270	2,181
Uncultivable . . . . .	4,659	4,890	384	378
Total cultivated area . . . . .	10,226	10,258	10,651	11,465
Irrigated from canals . . . . .	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>	<i>Nil</i>
"    "    wells . . . . .	66	85	106	58
"    "    other sources . . . . .	2	2	1	1
Total irrigated area . . . . .	68	87	107	59
Unirrigated area . . . . .	10,158	10,171	10,544	11,406
<i>Cropped area.*</i>				
Rice . . . . .	35	57	80	54
Wheat . . . . .	1,346	926	389	707
<i>Jowār</i> . . . . .	3,405	3,594	4,520	4,414
Pulses . . . . .	849	786	798	929
Oilseeds . . . . .	964	732	580	606
Cotton . . . . .	3,266	3,302	3,819	4,455
Condiments and spices . . . . .	47	49	93	68
Orchard and garden produce . . . . .	24	37	65	44
Tobacco . . . . .	36	27	25	23
Miscellaneous . . . . .	254	202	288	193

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in different Districts from year to year ; but as the variations are not constant, they furnish no materials for an estimate of the conditions of any particular locality.

The increase in the cultivated area seems to have had no effect on prices, but the natural tendency of this increase towards the reduction of prices may have been counteracted by the improvement in means of communication. This improvement has not affected the price of *jowār*, which is not grown for export ; and though wheat is dearer now than it was thirty years ago, it is doubtful whether the rise in price is due to increased facilities for exportation. The effect of famine on prices is very marked. Thus in 1895-6 *jowār* sold at nearly 23 seers for the rupee, while in the following year, which was a season of scarcity, only  $11\frac{2}{3}$  seers could be obtained for that sum. In 1898-9 a rupee purchased  $27\frac{2}{3}$  seers, but in the famine year which followed, it would purchase no more than  $18\frac{1}{3}$  seers, in spite of low prices in the early part of the year ; while in 1900-1 the average rate was  $11\frac{1}{2}$  seers for the rupee, 5, 6, or 7 seers being the ordinary rate during the first six months of the year 1900, when the effects of the famine were most severely felt.

Another cause sometimes operates to reduce the price of grain. Thus, in 1880-1, 38 seers, and in 1884-5,  $30\frac{1}{2}$  seers of *jowār* could be purchased for a rupee. The fall in price was attributed in each case to the late rains, which in the former year made it impossible to store grain, and in the latter damaged the grain already stored.

The standard of comfort in Berār, though not high, is probably no lower than in any other rural tract in India. The house of the middle-class clerk, for which he probably pays a rent varying from Rs. 2 to Rs. 10 a month, is scantily furnished. His food costs him but little, for he is, in all probability, a Brāhman, and therefore a vegetarian ; but he uses such luxuries as wheat, rice, milk, *ghū*, and sweetmeats more freely than does the cultivator. His clothes are of fine cotton cloth, the *dhoti* having usually a border of silk, and he wears a silken turban ; but the whole outfit is so seldom renewed that it costs him comparatively little. The cultivator's style of living and the character of his house depend on the size of his holding ; but the distinction between the well-to-do and the impoverished cultivator consists largely in the quantity and quality of the jewellery worn by the women of the family. The cultivator's clothes are of coarse cotton cloth. The labourer's standard of living is similar to the cultivator's, but lower. His house is smaller and meaner, his cooking pots fewer, his food scantier, and his family jewellery less costly. There has been no perceptible change in the standard of living of these classes. So little does the cultivator understand physical comfort that when he was suddenly and temporarily enriched by the rise in the price of cotton, which was one of the results

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**Mines and  
minerals.**

There are at present no mines, but the prospects of successful coal-mining in the south-eastern corner of the province are good.

The manufactures are few and unimportant. They are chiefly confined to twist and yarn, coarse cotton cloth, and the productions of unskilled craftsmen. Silk-weaving is carried on

**Arts and  
manufactures.**

at Kholāpur in Amraotī District, where *pīlāmbar*s are made; cotton carpets are woven at Akot and Ellichpur; *sārīs*, turbans, *kāhādīs*, and blankets are made in several parts of the province, and *kāhādīs* of different textures and colours at Ellichpur and Wūn. There are also communities of dyers in some towns and villages, but their work calls for no special notice. The only spinning and weaving-mill in the province, at Badnera, is the property of the Berār Manufacturing Company, Limited. It started work in 1885, and produces yarn and cotton cloth. The following table gives some statistics of its progress :—

	1890-1.	1900-1.	1903-4.
Number of looms . . . . .	214	248	248
Number of spindles . . . . .	16,580	16,992	16,336
Hands employed . . . . .	843	1,228	882

In 1891 it worked up 17,128 cwt. of raw cotton into yarn and cloth, and in 1901 it similarly worked up 25,288 cwt. of raw cotton. The out-turn in 1902-3 was 21,337 cwt. of yarn and 9,689½ cwt. of cloth. The greater part of its produce is sold locally. The monthly wages of skilled labour in this factory vary from Rs. 35 to Rs. 5-4-0, and those of unskilled labour from Rs. 8 to Rs. 5. The most important industry in the province is the ginning and pressing of cotton in steam factories. The following table shows the rapid advance made during the last twenty-four years :—

	1881.	1891.	1901.
Number of ginning factories . . . . .	...	48	152
Number of steam presses . . . . .	6	27	59

Migration from rural areas into towns is principally due to the growth of this industry. The supply of labour is inadequate, and the great majority of the hands employed belong to the province. A man earns on an average Rs. 9 to Rs. 9-8-0, a woman from Rs. 4-12-0 to

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STATISTICS OF THE VALUE OF THE TRADE OF BERĀR WITH  
OTHER PROVINCES OF INDIA FOR THE YEARS 1890-1,  
1900-1, AND 1903-4  
(In thousands of rupees)

	By rail.		
	1890-1.	1900-1.	1903-4.
<i>Imports.</i>			
Cotton twist and yarn . . .	8,71	5,99	7,04
„ piece-goods . . .	43,13	41,21	48,15
Grain and pulse . . .	17,17	91,09	55,77
Metals and manufactures of metals . . .	16,02	21,02	58,20
Oils . . .	10,79	9,82	13,18
Provisions . . .	18,96	25,52	30,63
Salt . . .	14,01	13,49	12,66
Spices . . .	14,18	12,68	13,86
Sugar . . .	22,52	30,47	35,02
All other articles . . .	22,88	21,50	72,22
Total	1,88,37	2,72,79	3,46,73
Treasure . . .	...	1,65,96	2,43,25
<i>Exports.</i>			
Cotton goods . . .	11,11	47,16	7,23
„ raw . . .	3,20,97	3,37,44	5,87,19
Grain and pulse . . .	14,16	7,54	84
Oilseeds . . .	36,17	41,92	32,75
Provisions . . .	3,04	2,16	1,47
Spices . . .	84	1,55	88
Sugar . . .	42	2,03	1,96
All other articles . . .	14,51	14,93	26,11
Total	4,01,22	4,54,73	6,58,43
Treasure . . .	...	22,03	82,39

Berār is traversed from east to west by the Nāgpur branch of the Great Indian Peninsula Railway, the length of the line in the province being 152 miles. From this main line two small **Communications.** state railways branch off, one from Jalam to Khāmgaon (8 miles) and the other from Badnera to Amraotī (6 miles). The Khāmgaon and Amraotī State Railways are worked by the Great Indian Peninsula Railway Company. The capital outlay on the former was 5.2 lakhs, and on the latter 4.5 lakhs. During the ten years ending 1901-2 their receipts averaged Rs. 52,100 and Rs. 98,800, and their expenditure was Rs. 30,600 and Rs. 59,000; and their net profits averaged Rs. 21,500, or 4.12 per cent. on the capital outlay, and Rs. 39,900, or 8.82 per cent. on the capital outlay. There is one mile of railway in the province to every 107 square miles of country.

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General. The following statistics show the advance in postal business in the province since 1880 :—

	1880-1.	1890-1.	1900-1.	1903-4.
Number of post offices .	102	69	164	186
Number of letter-boxes .	167†	116†	125†	156
Number of miles of postal communication .	939	1,567	1,485	1,251½
Total number of postal articles delivered :—				
Letters . . .	*	2,614,485†	2,925,579†	2,649,296
Postcards . . .	*	1,176,734†	2,254,284†	2,667,730
Packets . . .	*	122,513†	411,026†‡	242,034†
Newspapers . . .	*	311,397†	244,394†	435,474
Parcels . . .	*	26,002†	42,992†	39,384
Value of stamps sold to the public . Rs.	42,688†	88,169†	1,16,624†	Not available
Value of money orders issued . . Rs.	*	27,26,810†	45,66,560†	37,92,138
Total amount of savings bank deposits . Rs.	...	*	8,68,905†	12,07,720

\* The figures are included in those given for the Central Provinces.

† The figures marked thus include the figures for the post offices in Hyderabad State included in the Central Provinces and Berār Postal Circle.

‡ Including unregistered newspapers. || Registered as newspapers in the Post Office.

The statistics given above relate to both the Imperial and the local or District post. The latter system provided postal communications required for magisterial and police purposes, the upkeep of which was not warranted under the commercial principles of the Post Office. It was maintained by contributions from District boards supplemented by a Government grant. The number of District post offices in 1904 was 30, and the total length of District post mail lines 554 miles. Official correspondence conveyed entirely over District post lines was carried free. The two systems were amalgamated in 1905.

Berār was for many years considered to be specially favoured by nature; and so lately as in 1893 it was officially reported that no programme of relief works was required, as the province was immune from famine. The Administration was thus utterly unprepared to cope with distress arising from scarcity when in 1896 the crops partly failed.

Scarcity and famine in Berār, as in most other parts of India, are due to the failure of the south-west monsoon, and the intensity of the calamity varies with the extent of the failure; but oppressively high prices are liable to occur even when the harvest in Berār has been fairly good, if severe famine in other parts of India stimulate the export of grain.

The Melghāt is more liable to famine than any other part of Berār, owing to the comparative poverty of the soil and the thriftlessness of the aboriginal cultivators, but no distinction can be drawn between

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An almost total failure of the rains in 1899 was followed in 1900 by a severe famine. Except in Wūn District, the failure of crops was complete; and the distress lasted till late in 1900, when copious rain and the prospects of a good harvest caused a fall in prices and restored the labour market to its normal condition.

A general increase in mortality during a famine is inevitable. In Berār it has been found that the mortality increases gradually until the hot season has set in. It then increases more rapidly, but does not reach its highest point until a considerable quantity of rain has fallen. Thus, in 1900 the highest death-rate (12 per 1,000 in the month) was not reached till August. The rapid increase after the commencement of the rains is due to inevitable exposure, to bowel complaints caused by the consumption of foul water and rank green-stuff, and to endemic diseases, the virulence of which is naturally more marked when large numbers are predisposed to disease. A very distinct decrease in the birth-rate is observable in the year following a famine.

An extensive system of irrigation is impracticable in Berār, though storage tanks might perhaps be constructed in the Melghāt and the Bālāghāt. Protective measures, other than the maintenance and extension of railway communication, are therefore confined to preparation for emergencies. Programmes of large and small relief works are maintained, and during a famine a system of village relief by the distribution of cooked and uncooked food is inaugurated. Poorhouses are opened for the decrepit and deformed, loans are freely granted to cultivators under the two Acts which govern their issue, private charity is stimulated, and those whose scruples prevent them from receiving gratuitous relief are helped by the opening of cheap grain-shops.

From the Assignment in 1853 until 1903, the administration of Berār was conducted by the Resident at Hyderābād, who exercised, in

**Administration.** respect of the province, the powers of a Chief Commissioner. His Secretariat consisted of his two Assistants, besides a Secretary and an Assistant Secretary in the Public Works department, while the Comptroller at Hyderābād exercised a general control, under the Resident, in financial matters. In 1903 the administration of Berār was transferred, in pursuance of the agreement of 1902, from the Resident at Hyderābād to the Chief Commissioner of the Central Provinces.

The province forms one Division, under a Commissioner, and up to 1905 was divided into six Districts—AMRAOTĪ, ELLICHPUR, WŪN, AKOLA, BULDĀNA, and BĀSIM—each under the charge of a Deputy-Commissioner. These have now been rearranged and form four Districts: Amraotī,

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**Administration.** respect of the province, the powers of a Chief Commissioner. His Secretariat consisted of his two Assistants, besides a Secretary and an Assistant Secretary in the Public Works department, while the Comptroller at Hyderābād exercised a general control, under the Resident, in financial matters. In 1903 the administration of Berār was transferred, in pursuance of the agreement of 1902, from the Resident at Hyderābād to the Chief Commissioner of the Central Provinces.

The province forms one Division, under a Commissioner, and up to 1905 was divided into six Districts—AMRAOTĪ, ELLICHPUR, WŪN, AKOLA, BULDĀNA, and BĀSIM—each under the charge of a Deputy-Commissioner. These have now been rearranged and form four Districts: Amraotī,



certain Acts and laws. Owing to the extensive application of Acts of the Legislative Council to the province, the administration of civil and criminal justice is in all respects similar to the administration of justice in a non-regulation Province of British India. The chief local laws passed since 1880 have been the Excise Law (1897), the Rural Boards Law (1885), the Municipal Law (1886), the Land Revenue Code (1896), the Berār Courts Law, and the Berār Small Cause Courts Law (1905).

In 1905, after the transfer of Berār to the Central Provinces, the Berār Courts Law and the Berār Small Cause Courts Law came into force; and the province is now divided, for the purposes of the administration of justice, into the two civil districts of East Berār, consisting of the revenue Districts of Amraotī and Yeotmāl, and West Berār, consisting of the revenue Districts of Akola and Buldāna. In each of the two civil districts a District Judge hears civil suits without limit as regards value, and is assisted by an Additional District Judge. Subordinate Judges, with powers to try and determine suits of which the value does not exceed Rs. 5,000, hold their courts at Amraotī, Morsī, Ellichpur, Daryāpur, and Yeotmāl in East Berār, and at Akola, Bāsim, Khāmgaon, and Buldāna in West Berār; and Munsifs, with power to try and determine suits of which the value does not exceed Rs. 500, sit at Amraotī, Morsī, Ellichpur (where there are two), Yeotmāl, and Dārwhā in East Berār, and at Akola, Bāsim, Malkāpur, and Mehkar in West Berār.

Appeals from the decrees of subordinate courts lie to the District and Additional District Judges; and appeals from the District courts lie to the court of the Additional Judicial Commissioner in Nāgpur, which is the Provincial High Court. Appeals from this court, when allowed by law, lie to the Privy Council.

Courts of Small Causes, with power to try suits of a civil nature not exceeding Rs. 1,000 in value and cognizable by such courts, are established at Amraotī in East Berār and at Akola and Khāmgaon in West Berār.

The limits of the two Sessions divisions coincide with those of the civil districts, in which the District and Additional District Judges exercise the powers of Sessions Judges. Sessions are held in alternate months at Amraotī and Yeotmāl in East Berār, and at Akola and Buldāna in West Berār. Deputy-Commissioners as District Magistrates are empowered under section 30 of the Code of Criminal Procedure to try as magistrates all offences not punishable with death, but they exercise this power only in exceptional circumstances. Subdivisional magistrates, with power to hear appeals from convictions by magistrates of the second and third classes and to call for records, are stationed at Ellichpur, Bāsim, and Khāmgaon.

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The following figures, showing, in thousands of rupees, the revenue collected under various heads in 1853-4, the year after the Assignment of Berār, indicate the principal sources of revenue under native rule :—

Land revenue . . . . .	19,15	<i>Sāyar</i> , or town duties . . . . .	71
Frontier and transit duties . . . . .	1,95	Salt wells . . . . .	19
<i>Abkāri</i> . . . . .	90	Miscellaneous . . . . .	22

About 74 per cent. of the revenue raised by or for the Nizām represented the assessment on the land. Other relatively important headings, such as transit and town duties and salt wells, have long since disappeared from the public accounts.

Former methods of taxation were most oppressive, for the greater part of the province was usually leased out to bankers in payment of debts due to them by the Hyderābād State, and they levied what they could. All were not equally extortionate, but the uncertainty of their tenure offered no inducement to ameliorate the condition of the cultivator. The last of these great farmers had to give up his lease in 1845 ; and for the next eight years the *khālṣa* land was administered by officers of the Nizām's government, whose yoke was probably no lighter than that of the farmers. It was customary for an officer appointed to any important administrative post to pay, on his appointment, a large donation, which he recovered from his charge. The people had scarcely recovered from these imposts, when the *tālukdārs* got wind of the Assignment to the British, and promptly raised the land revenue demand, in order that they might carry off as much as possible. So much had Berār suffered that, when it was 'assigned,' the revenues of this rich province were estimated, by a government which certainly had no temptation to underestimate them, at little more than 30 lakhs, while the actual collections in 1853-4 fell short of 26 lakhs. In 1860-1 they had risen to 40 and in 1869-70 to 83½ lakhs.

The Provincial contract system was introduced in 1880, the Resident's expenditure under the heads 'Civil,' and 'Public Works, including Railways,' being limited to 54 per cent. of the gross revenue. From the year 1882-3 the percentage was reduced to 52, and again in 1887-8 to 50, which rate, although fixed for five years, was found to be insufficient, and was raised to 51 in 1889-90. The percentage was again reduced to 50 for the quinquennium which ended in 1896-7, and this arrangement continued until the lease of Berār to the Government of India in 1903.

The following figures show, in lakhs of rupees, the principal variations in land revenue collections since the Assignment, the years selected being those in which the variation has been most marked :—

1853-4 . . . . .	19	1875-6 . . . . .	67
1872-3 . . . . .	53	1902-3 . . . . .	74½

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PRINCIPAL SOURCES OF PROVINCIAL REVENUE IN BERĀR  
(In thousands of rupees)

	Average for ten years ending March 31, 1890.		Average for ten years ending March 31, 1900.		Year ending March 31, 1901.		Year ending March 31, 1904
	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).	Amount credited to Provincial revenues.	Total amount raised (Imperial, Provincial, and Local).
Land revenue . . .	63,98	63,98	64,25	64,21	80,17	80,15	78,30
Opium . . .	1,85	1,85	1,60	1,60	1,50	1,50	...
Stamps . . .	6,60	6,60	8,31	8,31	6,74	6,74	8,48
Excise . . .	13,45	13,45	13,78	13,78	9,85	9,85	19,94
Provincial rates	4,73	...	5,87	...	0,37	...	6,47
Customs . . .	...	...	7	7	15	15	17
Assessed taxes . . .	...	...	69	...	89	...	1,42
Forest . . .	3,30	3,30	4,72	4,72	3,03	3,03	6,07
Registration . . .	56	56	84	84	81	81	97
Other sources . . .	2,80	2,59	4,79	3,45	4,68	3,27	5,21
Total	97,27	92,33	1,04,92	96,98	1,14,19	1,05,50	1,27,03

The holder of a field or 'survey number' is called the registered occupant or *khātedār*, and he holds on condition of paying the assessment and other dues. Failure to pay these dues renders him liable to forfeit the right of occupancy and all rights connected with it, such as those over trees and buildings on the land. Land thus forfeited reverts to Government, and the right of occupancy is put up to sale by auction after due notice. No occupant is bound to hold his land for more than a single year. He may, on giving due notice, relinquish it, or he may dispose of the occupancy right by sale or otherwise to another; but he is responsible for the revenue of the year in which he relinquishes or transfers his right. An occupant may, if he chooses, retain his occupancy right for ever, subject to the payment of the assessment and dues, which are liable to revision once every thirty years. He may also sublet his holding, but only by private arrangement, which finds no place in the revenue records.

This description applies to the *ryotwārī* tenure, which is the ordinary tenure of Berār. The extraordinary tenures are *jāgīr*, *inām*, *ijāra*, and *pālampat*. The term *jāgīr* means any rent-free holding of one or more villages. Nearly all the *jāgīrs* in Berār have been granted either by

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the rent is doubled, in the sixth trebled, and so on, until the full assessment is reached. The object of the lease being to encourage the breaking-up of the land for cultivation, tracts containing valuable timber are excluded, and quarrying or mining is prohibited; but special arrangements are made in the lessees' favour in the case of an excess of uncultivable land, and special rules are laid down with regard to grazing. During the currency of the lease the *ijāradār* is *pātel* and *patwāri* of the village; and at its expiry, when the village is liable to be surveyed and to have its assessment revised, the offices of *pātel* and *patwāri* are offered to him, and he is registered as the occupant of all land then actually occupied by him. Such are the rules of 1880, which are now in force. Under the former rules of 1865 the term of the lease was limited to thirty years; and the lessee had the option, on the termination of his lease, of constituting the village his property in perpetuity, subject to the payment annually to Government of one-half of a fair assessment, liable to revision every thirty years, upon the whole of the cultivated and cultivable area.

In 1901 the number of villages held under each class of tenure was as follows: *ryotwāri*, 6,133; *jāgīr*, 211; *ijāra*, 449; *pālampat*, 16. Of the assessment of *ryotwāri* villages amounting to 70·6 lakhs, land assessed at Rs. 75,500 was occupied by *ināmdārs*.

Persons holding by cultivation occupancy may be thus classified:—

(a) Registered occupants holding direct from Government, the fields being registered in their names;

(b) Persons possessing interests similar in kind to that of registered occupants; and

(c) Tenants.

The position of the registered occupant has already been described. Those who possess an interest similar to his are co-sharers and co-occupants. A co-sharer is a partner in a whole field, cultivating jointly with the occupant on the co-operative system; a co-occupant occupies and cultivates a specific portion of a field. Co-sharers and co-occupants may have co-sharers and co-occupants claiming under them and not directly from the registered occupant. There are two exceptional varieties of co-sharers: one who obtains a share in the profits by personal labour in the field, and one who obtains a share by supplying bullocks. The latter variety of sub-tenure is rare.

The land revenue of Berār in 1903-4 was 85 lakhs. It is estimated that, when the enhanced assessment of the *tālūks* of Murtazāpur, Amraotī, Morsī, Bāsim, Mangrūl, Ellichpur, Dārwhā, and Pusad—the levy of which has been postponed in order to allow time to recover from the effects of the famine of 1899-1900—is realized in 1906, the land revenue of the province will amount to 99 lakhs.

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This being so, it is obvious that the assessment has no bearing whatever on the ability of the people to withstand famine, for in a prosperous year the cultivator would not feel a deduction of 7 per cent. from his gross produce. When crops failed completely—a phenomenon of very rare occurrence—he might be able to meet the demand from savings; but should he be unable to do this the demand would be postponed for a year at least, so that in the year following the failure of crops he would be able to pay 14 per cent. of the gross produce without hardship.

The principle observed in suspending and remitting land revenue in times of scarcity is that nobody should be compelled to borrow in order to meet the demand. *Tahsildārs* are required to prepare lists of all landholders known to be able to meet the demand, and to recover it by the ordinary procedure. It is ordinarily assumed that recent purchasers, mortgagees in possession, occupants other than agriculturists, and occupants of fields which have yielded half of a normal crop are able to pay. The Deputy-Commissioner is empowered to suspend collections of land revenue due from persons who, by reason of their known inability to pay, have not been entered in the *tahsildār's* list. When the prospects of the next *kharīf* crop can be estimated with some degree of accuracy, the Deputy-Commissioner submits to the Commissioner his proposals regarding the collection of arrears. Remissions of land revenue are few because, owing to the light assessment, they are generally unnecessary.

The cultivation of the poppy has not been allowed in Berār for many years, all opium required for local consumption being imported from either Indore or Bombay. The right to sell opium, whether wholesale or retail, is sold annually by auction. Wholesale vendors receive licences to import opium, which is stored by them at sub-treasuries or authorized storerooms, and may be sold to none but licensed retail vendors. The latter receive licences authorizing them to open shops in localities approved by the Deputy-Commissioner for the sale of opium to the general public, and in certain circumstances are permitted to import opium.

The following statement shows the net revenue realized from opium since 1881:—

						Rs.
Average {	1881-90	.	.	.	.	2,97,000
	1891-1900	.	.	.	.	3,00,000
	1903-4	.	.	.	.	4,17,000

The figures for 1881-90 and 1891-1900 do not accurately represent the revenue derived from opium alone, for until 1893-4 the right to sell hemp drugs was included in the opium licences, and separate figures are not available.

The cultivation of the hemp plant in Berār has hitherto been

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for two reasons : namely, that the people cannot afford to go to law, and that the prospect of recovering anything, even if a suit be successful, is poor. Similarly, by affecting trade, they cause a decrease in the sales of general stamps, though this effect is largely counteracted by the necessity for borrowing. Plague in Bombay has had a detrimental effect on trade, and consequently on the sale of general stamps in Berār.

During the period of the Assignment income-tax was not levied in the province, except from officers of the administration. It has been introduced since the lease.

The Berār Rural Boards Law (1885) was the enactment which introduced local self-government into the province ; but the first elections for *tāluk* boards did not take place till late in 1888 and early in 1889. The District of Wūn was at first excluded from the operation of the law, which was only extended to it in 1892, and the Melghāt *tāluk* has always been unrepresented.

Local and  
municipal.

The newly constituted District boards commenced their work in 1890 ; and although the law, the rules made, and the system of accounts laid down were not at first clearly understood, the working of the newly formed bodies has been on the whole satisfactory, and the members have displayed some interest in their duties.

There are now twenty-one *tāluk* boards, one for each *tāluk* outside the Melghāt, and six<sup>1</sup> District boards. The latter were composed in 1901 of 152 members, of whom 122 were elected. The *tāluk* boards had 373 members, of whom 243 were elected. The functions of District boards are generally those mentioned in Vol. IV, chapter ix ; and their principal duties are in connexion with the upkeep of roads, schools, dispensaries, resthouses, and drinking-water sources. The *tāluk* boards form, in practice, the electorate for the District boards ; and they constitute the local agencies for the carrying out of District board works, and for representing to the District boards the needs of their *tāluks*.

Speaking generally, it cannot be said that the principles of local self-government have made much headway. The percentage of actual voters to those entitled to vote is usually about 8 or 9, and sometimes as low as 3 or 4. Nine candidates out of ten would probably think it a greater honour to be appointed by Government to the membership of a board than to be elected.

Municipal administration was introduced into the towns of Amraotī, Akola, Ellichpur, Bāsim, Yeotmāl, and Khāmgaon in 1869, under special rules for the working of municipal committees drawn up under section 10 of Act XV of 1867. The committees were composed of both

<sup>1</sup> Reduced to four in 1905.

for two reasons : namely, that the people cannot afford to go to law, and that the prospect of recovering anything, even if a suit be successful, is poor. Similarly, by affecting trade, they cause a decrease in the sales of general stamps, though this effect is largely counteracted by the necessity for borrowing. Plague in Bombay has had a detrimental effect on trade, and consequently on the sale of general stamps in Berār.

During the period of the Assignment income-tax was not levied in the province, except from officers of the administration. It has been introduced since the lease.

The Berār Rural Boards Law (1885) was the enactment which introduced local self-government into the province ; but the first elections for *tāluk* boards did not take place till late in 1888 and early in 1889. The District of Wūn was at first excluded from the operation of the law, which was only extended to it in 1892, and the Melghāt *tāluk* has always been unrepresented.

The newly constituted District boards commenced their work in 1890 ; and although the law, the rules made, and the system of accounts laid down were not at first clearly understood, the working of the newly formed bodies has been on the whole satisfactory, and the members have displayed some interest in their duties.

There are now twenty-one *tāluk* boards, one for each *tāluk* outside the Melghāt, and six<sup>1</sup> District boards. The latter were composed in 1901 of 152 members, of whom 122 were elected. The *tāluk* boards had 373 members, of whom 243 were elected. The functions of District boards are generally those mentioned in Vol. IV, chapter ix ; and their principal duties are in connexion with the upkeep of roads, schools, dispensaries, resthouses, and drinking-water sources. The *tāluk* boards form, in practice, the electorate for the District boards ; and they constitute the local agencies for the carrying out of District board works, and for representing to the District boards the needs of their *tāluks*.

Speaking generally, it cannot be said that the principles of local self-government have made much headway. The percentage of actual voters to those entitled to vote is usually about 8 or 9, and sometimes as low as 3 or 4. Nine candidates out of ten would probably think it a greater honour to be appointed by Government to the membership of a board than to be elected.

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1899-1900, and assistance by means of grants from Provincial revenues was found necessary. The municipalities generally have shown some remissness in the collection of arrears of taxation. The financial condition of all places, except Akola, Khāngaon, and the Amraoti civil station, is now satisfactory, and in these three an increase of taxation is possible.

Electoral privileges are not highly valued. When the elective principle was first introduced, it was believed that the apathy of the electorate was due to ignorance, and that as the privileges of self-government came to be understood they would be appreciated. These anticipations have not been realized. The proportion of actual voters to the whole body of the electorate varies much at different times and in different municipalities, but a study of the figures for the period from 1889-90 to 1900-1 can only lead to the conclusion that interest in municipal self-government has declined and is declining.

#### INCOME AND EXPENDITURE OF MUNICIPALITIES IN BERĀR

	Average for ten years 1891-1900.	1901.	1903-4.
<i>Income from—</i>	Rs.	Rs.	Rs.
Tax on houses and lands . . . .	6,389	35,377	37,040
Other taxes . . . . .	57,576	64,099	97,542
Rents . . . . .	16,390	15,036	19,472
Loans . . . . .	13,766*	31,000	...
Other sources† . . . . .	3,78,882	2,13,519	1,32,847
Total income	4,73,003	3,59,031	2,86,901
<i>Expenditure on—</i>			
Administration and collection of taxes . . . . .	18,399	24,879	24,076
Public safety . . . . .	9,399	9,149	10,310
Water-supply and drainage—			
(a) Capital . . . . .	26,017	2,752	20,527
(b) Maintenance . . . . .	25,116	16,392	18,072
Conservancy ‡ . . . . .	61,211	66,976	73,711
Hospitals and dispensaries . . . . .	8,081	8,810	6,499
Public works . . . . .	28,725	1,37,170	31,394
Education . . . . .	24,491	39,085	41,376
Other heads . . . . .	1,93,168	2,06,440	54,123
Total expenditure	3,94,607	5,11,653	2,80,088

\* Figures for three years, 1893, 1894, and 1900.

† 'Other sources' includes income from pounds, hackney carriages, sale-proceeds of lands and produce of lands, conservancy receipts other than taxes and rates, fees from institutions, markets, slaughter-houses, &c., interest on investments, grants and contributions, and recoveries on account of services.

‡ Including road-cleaning and watering and latrines.

The province is divided into two Public Works divisions, each under the charge of an Executive Engineer. The East Berār division consists of the Districts of Amraoti and Yeotmāl, and the West Berār

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officers and men in 1903 was 2,900, giving one policeman to every 6.1 square miles of country and to every 949 inhabitants. There are no rural police.

The force is recruited principally in the province, and the sanction of the Inspector-General of Police is necessary for the enlistment of men who are not natives of Berār or the Deccan. The enlistment of Gurkhas, Sikhs, and frontier Pathāns is prohibited; and the authorized proportions of various classes in the police are 40 per cent. Musalmāns, 20 per cent. Hindus of Hindustān, and 40 per cent. Hindus of the Deccan and other classes. Owing to the difficulty of obtaining suitable Hindus, it is sometimes necessary to enlist Musalmāns in excess of the fixed proportion.

The newly enlisted policeman is trained in each District in a school, where reading, writing, elementary arithmetic, drill, and the laws and departmental rules which apply to the duties of the police are taught. Four standards of examination have been framed for non-gazetted officers and constables, and promotion is chiefly regulated by the results of these examinations. Service in the police cannot be said to be popular among educated natives.

No special measures have been taken of late years to improve the status and character of the police force. The principal measure adopted for the repression of organized and habitual crime has been the closer supervision of Banjārā encampments or *tāndās*, which have in most cases been moved closer to the sites of the villages in the lands of which they are situated. Banjārās were formerly employed as detectives, but the measure was only partially successful; for they were not always trustworthy, and were of no further use when their occupation became known to their fellows. Anthropometry has been abandoned as a means of identifying criminals, and dactylography has taken its place. The finger-print records have been largely increased of late years, and the police should soon have a complete record of habitual criminals in the province.

	1881.	1891.	1901.	1904.
<i>Supervising Staff.</i>				
District and Assistant Superintendent . . .	8	8	8	8
Inspectors . . . .	18	19	19	19
<i>Subordinate Staff.</i>				
Chief constables . . .	501	526	113	113
Head constables . . .			430	430
Constables . . . .			2,330	2,330
Total	2,661	2,876	2,900	2,900

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Since the redistribution of the Districts in August, 1905, the jails in Berār are classified as follows: the jails at Amraoti and Akola are Central jails, those at Buldāna and Yeotmāl District jails, and those at Ellichpur and Bāsim subsidiary jails.

The principal industries are: in the Amraoti jail, the lithographic printing of forms for official use, and weaving; and in the Akola jail, the manufacture of police and prison clothing, and weaving. Blankets are woven in both jails. In the small District jails coarse weaving, blanket-weaving, and oil-pressing are the principal industries; and the prisoners in all jails provide for their own needs by tilling the jail gardens and grinding their own meal. Stone-breaking is the commonest form of unskilled labour. Different departments of the administration take the greater part of the jail produce. Textiles, such as towels, dusters, tape, &c., are sold by private arrangement.

Neither under Hindu nor under Muhammadan rule were there any schools in Berār expressly supported by the Government. Brāhmans

**Education.** in receipt of money-grants and *ināms* taught Sanskrit and Marāthī, in most instances for payment; and schools in which the Arabic of the Korān, Persian, and Urdū were taught were supported by wealthy Musalmāns as a work of merit. The profession of teaching was regarded as derogatory, and was compared to the herding of cattle. In 1862 a few Marāthī and Anglo-Marāthī schools were established and placed under District officers; and in 1866, when there were 35 schools with an attendance of 1,881 pupils, a department of Public Instruction was organized under the control of a Director, assisted by a Deputy-Inspector for each District. Two European Inspectors were next appointed, but after 1873 there was only one Inspector for the whole province. In 1903 the administration of Berār was transferred to the Central Provinces, and the supervising agency under the Director of Public Instruction for both areas now consists in Berār of one European Circle Inspector, and eleven Deputy and Sub-Deputy-Inspectors.

There is no college in Berār, but scholarships are tenable in the Arts, Science, and Medical colleges of the Bombay Presidency by candidates from the Berār high schools. The educational authorities in Berār are not directly concerned with the further education of those who proceed to these colleges. In 1881 nine, in 1891 fifteen, and in 1903 twenty-seven students from Berār matriculated, and the average annual number of graduates for the last fourteen years has been two.

Secondary schools are of two classes: namely, high and middle schools, English being taught in both. There are seven standards in the curriculum of English education, the first three of which form the middle school course. The first English, which succeeds the fourth vernacular standard, includes arithmetic to the end of compound pro-

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feeling that a girl who has attained the age of puberty, which may be fixed at about twelve, is better at home than at school.

The training school for teachers at Akola is a useful institution. It contains Marāthī and Hīndustānī divisions, and was attended in 1881 by 71 teachers, in 1891 by 91, and in 1904 by 47. The Government industrial school at Amraotī is at present an unimportant institution, with an attendance of 12. The Alliance Mission Workshop at Akola is an industrial school under competent management, with an attendance of 29. Instruction is given in ironwork, carpentry, and other handicrafts, and the pupils are generally well started in the world. In the Korkū Mission school at Ellichpur, 62 pupils are taught masonry, painting, smiths' work, and carpentry.

The Convent school and the Anglican school at Amraotī are the only schools for Europeans and Eurasians in the province. Both are mixed schools. In 1904 the former had on its rolls 17 boys and 27 girls, and the latter 11 boys and 3 girls. The highest standard in the former was the seventh, and in the latter the fifth, and the two schools received monthly grants of Rs. 100 and Rs. 40. Boys have usually proceeded from these schools to others before making a start in life.

From the following table, which shows for the three census years 1881, 1891, and 1901 the percentage of Muhammadan and Hīndu boys attending secondary and primary schools to the total male population of school-going age of each class, it will be seen that in Berār Musalmāns are not behind Hindus in appreciating the benefits of education :—

	1881.		1891.		1901.	
	Musalmāns.	Hindus.	Musalmāns.	Hindus.	Musalmāns.	Hindus.
In secondary schools	0.03	0.08	1.46	1.36	1.24	1.13
In primary schools .	17.07	9.45	25.91	12.28	19.91	10.0

These figures, however, include all classes of Hindus, the more backward castes among whom have hardly been touched by education ; and it must be understood that Musalmāns as a class are far less anxious for education than Brāhmans and other advanced castes among Hindus. Satisfactory progress has, nevertheless, been made. The establishment of separate Hīndustānī schools, the existence of which dates back almost to the introduction of a system of education, can hardly be mentioned as an instance of special encouragement, for the Musalmān has as much right to receive instruction through the medium of his mother tongue as the Marāthā has to receive it through the medium of his. Musalmāns are, however, encouraged by being treated leniently in the matter of fees. The standards and the subjects taught in Hīndustānī schools are similar to those in the curriculum for Marāthī schools ; but instruction

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## EDUCATIONAL STATISTICS IN BERĀR

Class of institutions.	1880-1.				1890-1.				1900-1.				1903-4.			
	Number of institutions.	Scholars.		Number of institutions.	Scholars.		Number of institutions.	Scholars.		Number of institutions.	Scholars.		Number of institutions.	Scholars.		Number of institutions.
		Male.	Female.		Male.	Female.		Male.	Female.		Male.	Female.		Male.	Female.	
<i>Public.</i>																
Secondary schools :—																
Upper (High) . . .	2	54	...	2	401	...	3	570	...	3	570	...	3	462	...	...
Lower (Middle) . . .	5	196	...	24	4,268	...	25	3,613	...	185	3,613	...	185	12,210	852	852
Primary schools . . .	867	31,507	393	1,247	43,659	1,764	999	39,080	2,835	999	39,080	2,835	889	36,979	1,899	1,899
Training schools . . .	...	...	...	1	91	...	1	57	...	1	57	...	2	47	8	8
Other special schools . . .	1	71	...	1	25	...	3	93	...	3	93	...	3	118	...	...
<i>Private.</i>																
Advanced . . .	...	...	...	6	99	...	2	65	...	5	65	...	5	57	...	...
Elementary . . .	...	...	...	6	32	3	3	145	213	3	145	213	3	23	44	44
Total	875	31,828	393	1,287	48,575	1,767	1,036	43,623	3,052	1,036	43,623	3,052	1,090	49,896	2,803	2,803

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